



Program to Enhance Competence of Art Teachers in University under the Background
of New Liberal Arts in Ningxia

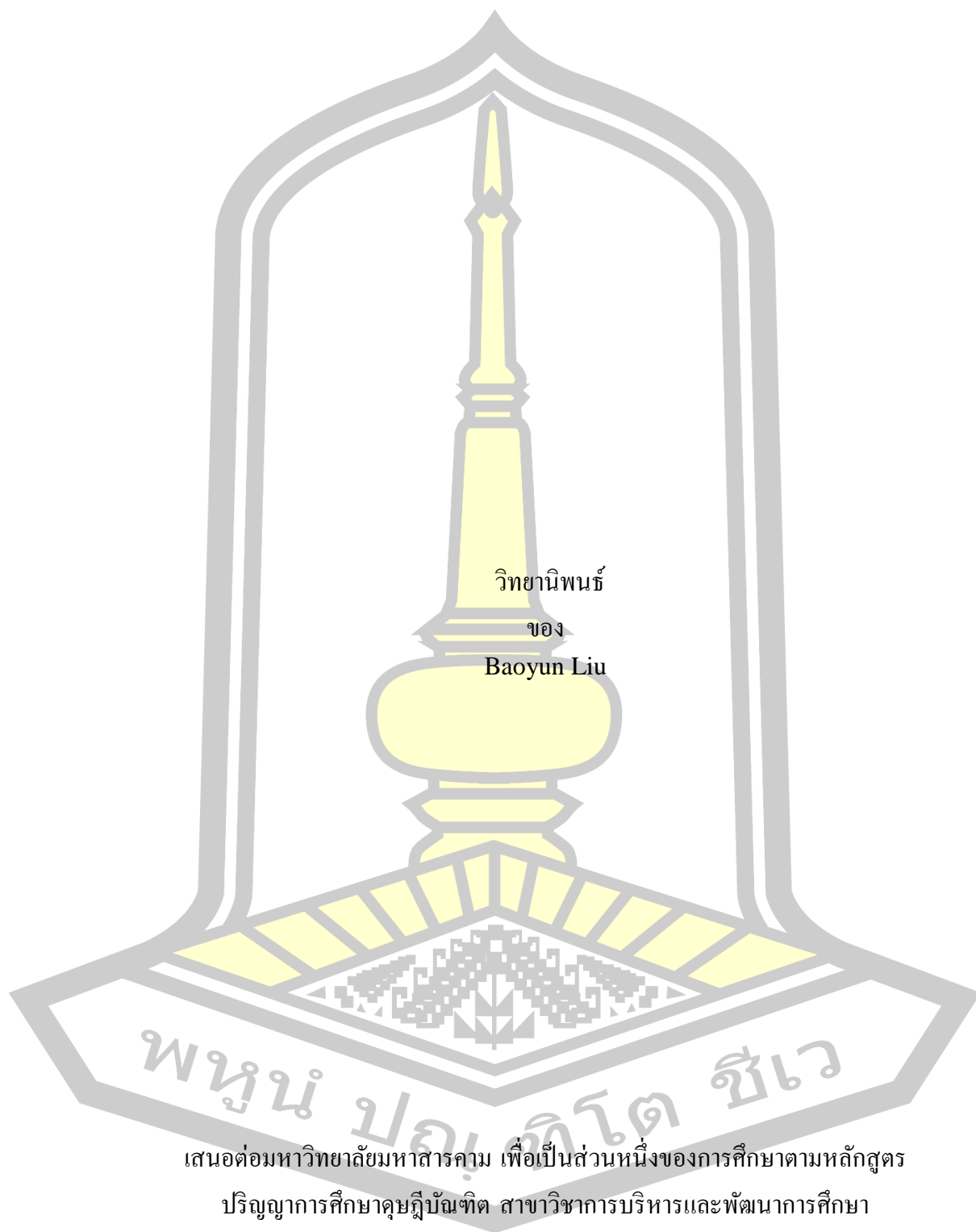
Baoyun Liu

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Doctor of Education in Educational Administration and Development

April 2025

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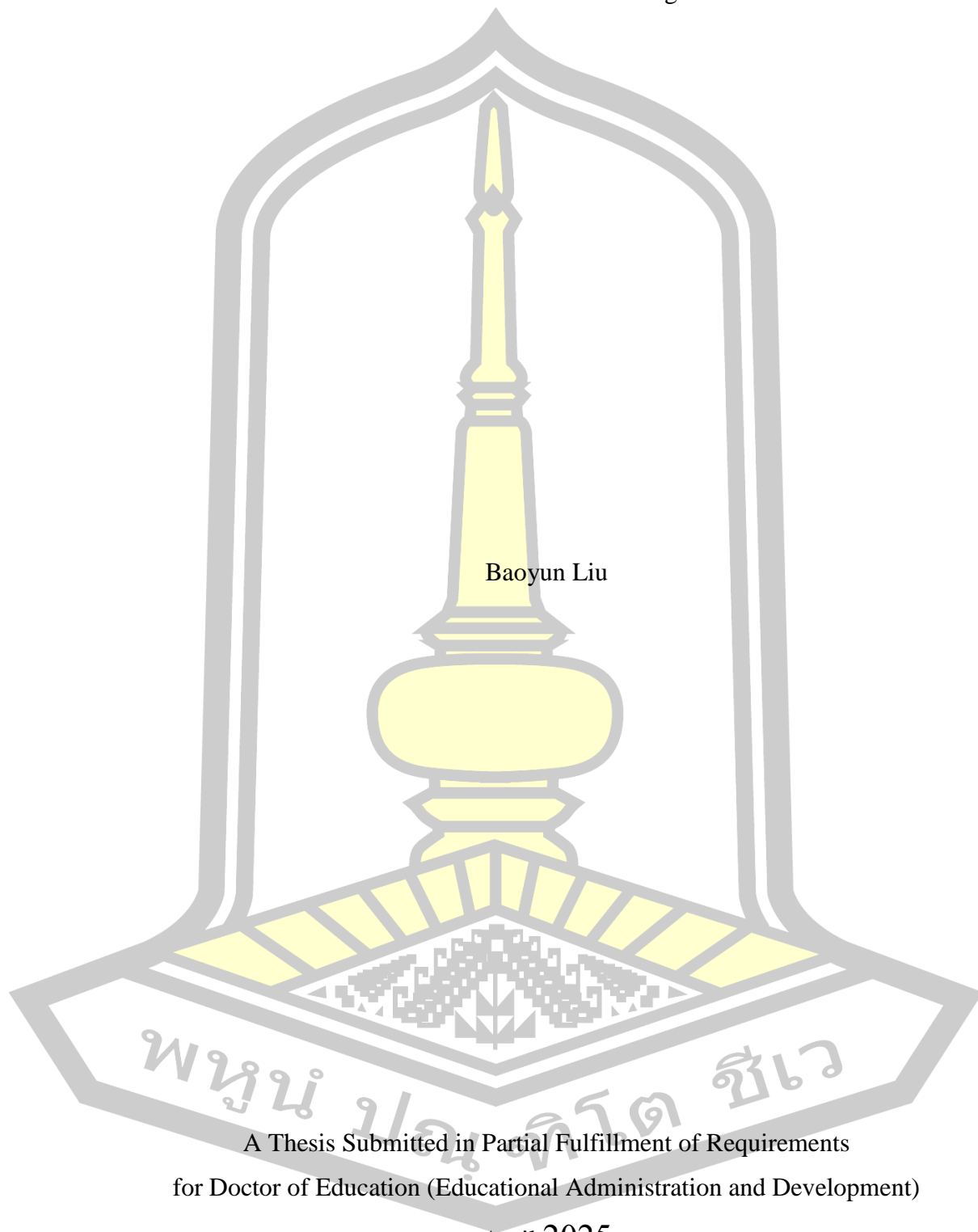


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Program to Enhance Competence of Art Teachers in University under the Background
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ABSTRACT

The research aims to 1) investigate the components of competence of art teachers in university under the background of New Liberal Arts. 2) explore of existent state, desired state and priority needs of competence of art teachers in university under the background of New Liberal Arts in Ningxia. 3) create a program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. The research was divided into 3 phases: Phase 1: investigating components of the competence of art teachers in university under the background of New Liberal Arts, and confirming the suitability of these components with 5 experts. Phase 2: exploring existent state, desired state, and priority needs of the competence of art teachers in university under the background of New Liberal Arts in Ningxia. The sample group of this phase includes 6 colleges and universities with art majors in Ningxia, including 20 art teacher and administrators and 185 art teachers. Phase 3: creating a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia. In-depth interviews with 5 experts for studying the principles and methods for developing competence of art teachers and 5 experts for evaluation the suitability and feasibility of the program to enhance competence of art teachers. Research instrument consisting of interview form, questionnaire and assessment form. Statistics in the research included percentage, mean, and standard deviation, and content analysis.

The research results found that:

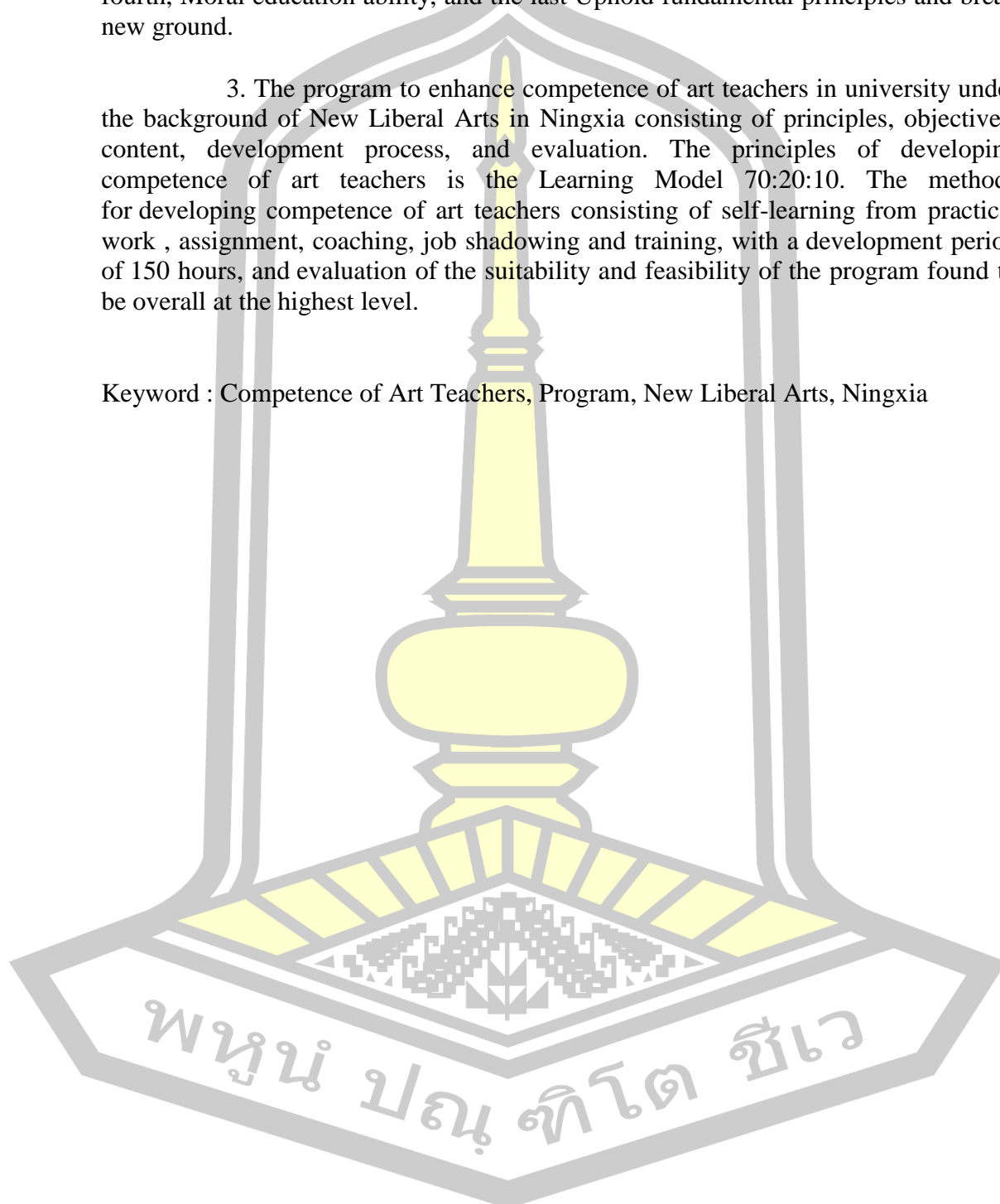
1. The components of competence of art teachers in university under the background of the New Liberal Arts consists of : 1) Knowledge Literacy, 2) Didactic Ability, 3) Digital Literacy, 4) Uphold fundamental principles and Break new ground, 5) Moral education ability, and the results of evaluation of the components were overall at the highest level of suitability.

2. The existent state of competence of art teachers in Ningxia

universities was overall at the medium level, the desired state of those was overall at the highest level, and the order of the priority need index modified(PNImodified) the first, Digital literacy, the second, Didactic ability, the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground.

3. The program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia consisting of principles, objectives, content, development process, and evaluation. The principles of developing competence of art teachers is the Learning Model 70:20:10. The methods for developing competence of art teachers consisting of self-learning from practical work , assignment, coaching, job shadowing and training, with a development period of 150 hours, and evaluation of the suitability and feasibility of the program found to be overall at the highest level.

Keyword : Competence of Art Teachers, Program, New Liberal Arts, Ningxia



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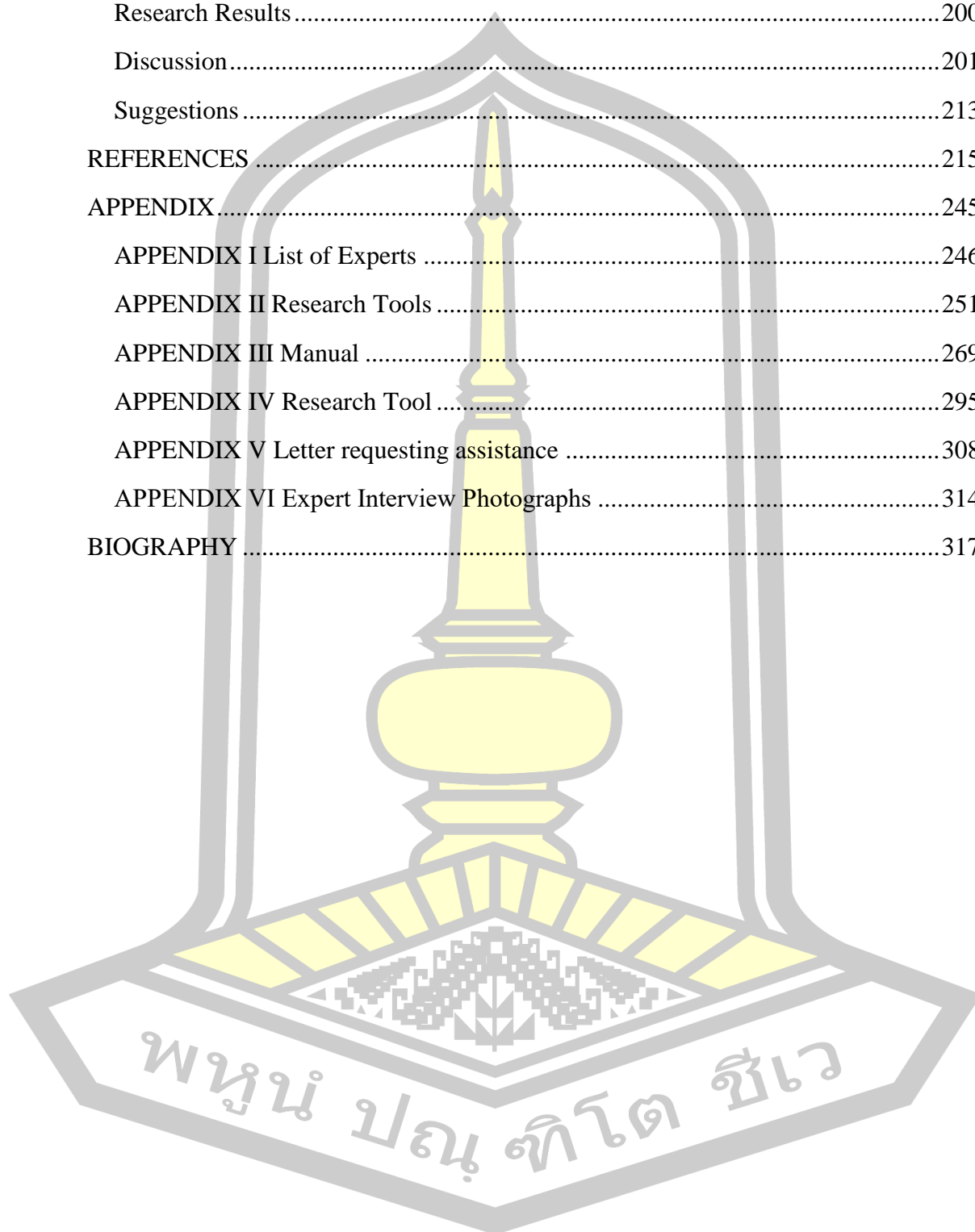
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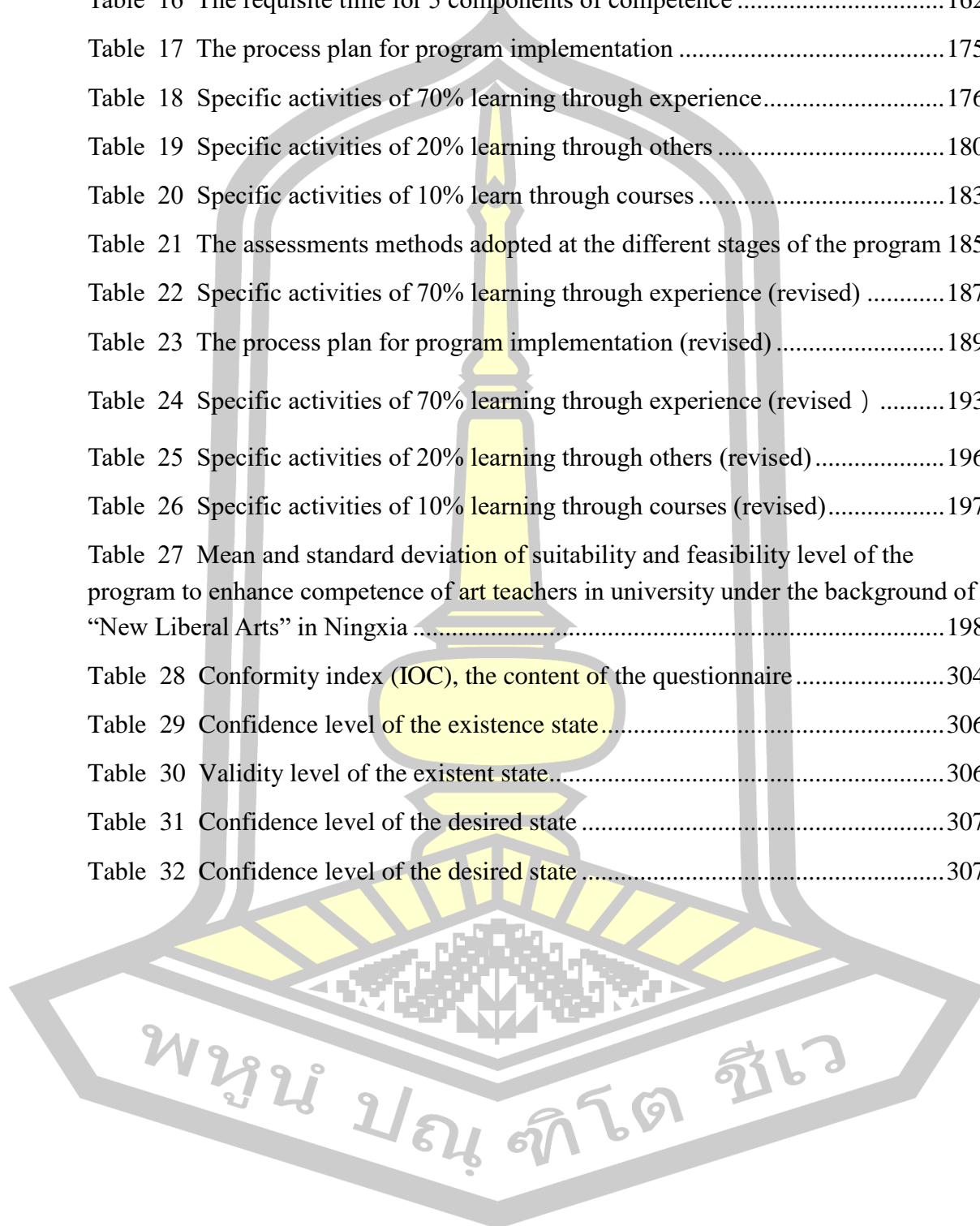
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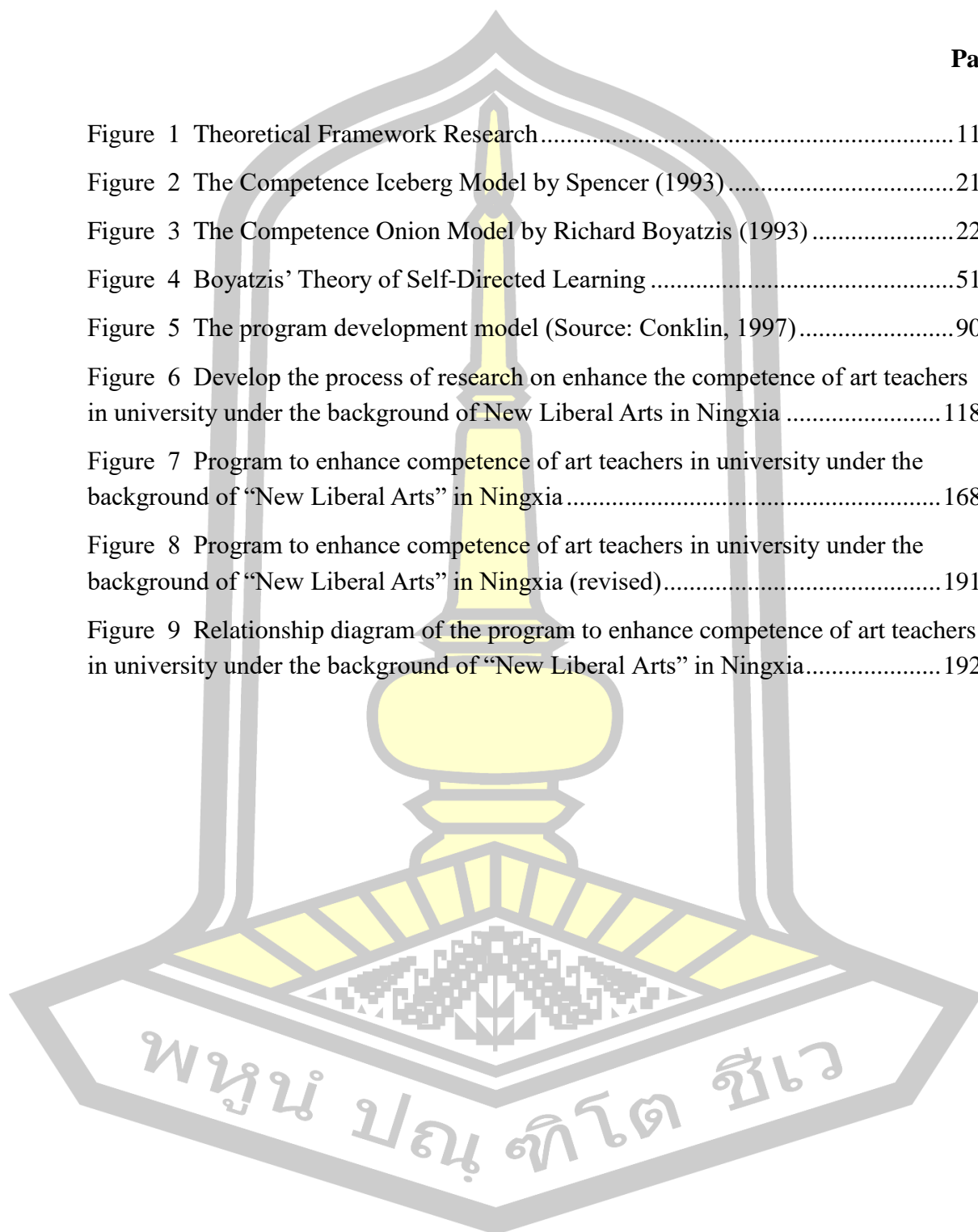
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CHAPTER I

INTRODUCTION

Background

Personal conditions and behavioral traits that directly affect job performance are known as competence, and employees are examined using the principles of testing based on competence traits. (McClelland, D.C., 1973) Competence is the underlying, deep-rooted personal characteristic that distinguishes high performers from mediocre performers in a given job (or organization or culture), and can be any individual characteristic in motivation, traits, self-image, attitudes or values, knowledge of a domain, cognitive or behavioral skills that can be reliably measured or counted, and that can significantly differentiate between good performance and average performance on the job. (Mr. & Mrs. Spencer, 1993) Research on competence has created a buzz in the corporate world.

Competence theory has also received widespread attention in the field of education, and the search for refined, specialized and professional teacher competence identification, development and training tools has become an important task for universities to transform human resource management and promote teachers' competence enhancement. Teacher competence refers to the synthesis of teachers' personality traits, knowledge, and teaching skills and attitudes needed in different teaching contexts. (Dineke, E. H, 2004).

In today's world, the debate about the purpose of universities is clearly related to which teachers are needed and what they teach. (Moreira, Maria Alfredo, et al., 2023). Teachers are the most important actors in the teaching and learning process, and effective teaching is the fundamental task and primary responsibility of a professional teacher. Experienced teachers have professional competencies and personal attributes that can effectively motivate students to improve their academic performance (Padillo, G. G. et al., 2021). Quality education implies that teachers must possess personal skills, research competencies, and pedagogical skills that will enable them to perform their teaching functions effectively. (Maria Alfredo Moreira et al., 2023) With any pedagogical reform, all measures and endeavors to improve education

are ultimately centred on the quality of teaching and learning in which teachers teach and work with students. (Hattie, J., & Clinton, J., 2008) Therefore, pedagogical reforms must focus on the level of competence that teachers have to match, and the kind of competence that teachers must have in order to be able to teach effectively becomes a very critical issue. (Liakopoulou, M., 2011).

In November 2020, the Declaration on the Construction of New Liberal Arts was released, marking the full launch of the construction of New Liberal Arts. Its main tasks are to build a new pattern of philosophical and social sciences development centered on educating people and talents, to establish and improve a comprehensive development system integrating students, academics, and disciplines, to cultivate new-era liberal arts talents and new-era philosophical and social scientists capable of taking on the responsibility for the rejuvenation of the nation, and to promote the formation of a Chinese school of philosophical and social sciences. The emergence of the New Liberal Arts has brought about a revolution of an innovative nature in liberal arts education, rather than overthrowing the existence of traditional liberal arts (Liu Zhi, & Zhang Chaoran, 2021) From the executive level, the construction of the New Liberal Arts is to take root in the land of China, carry out a comprehensive reform of the traditional liberal arts, and actively explore the new mission, new concepts, new methods, new modes, and new mechanisms of the liberal arts in the colleges and universities of the new era, so as to bring the liberal arts construction into a new stage of high-quality development. (Xia Quan, 2023)

At present, the construction of "New Liberal Arts" in Chinese colleges and universities has entered the stage of comprehensive development. Art is one of the six disciplines of the liberal arts. How to promote new changes in art education in the context of the New Liberal Arts, and how to cultivate new artistic talents who can adapt to the development trend of contemporary education has become a proposition of the times in front of art educators in colleges and universities, and puts forward new requirements for the competence of art teachers in colleges and universities. Art teachers in colleges and universities need to review the teaching materials and teaching in a "broken" disciplinary perspective, to carry out disciplinary integration and innovation, to make use of modern scientific and technological means from the professional perspective, to inspire and reach the professional knowledge and life

confusion faced by students in reality, and to explore and seek scientific means and paths to solve professional knowledge confusion. (Wu Lihong, 2022) In the construction of "New Liberal Arts", we must examine the competence of art teachers in universities in order to redefine their competence in the light of the development of human life and education as a whole (Selvi, K., 2010).

At present, the current competence of art teachers in Ningxia colleges and universities cannot meet the requirements of the construction of New Liberal Arts. Firstly, there is still a gap between teachers' perception and the requirements of innovative development of New Liberal Arts. (Cao Lihua, & Xu Gang, 2021) Secondly, the value-led role of arts teachers is insufficient. Art teachers have insufficient awareness of inheriting local traditional culture (Bao Ling, & Zhu Haixue, 2022). Thirdly, the ability of interdisciplinary cross-fertilisation needs to be improved. There is a lack of "composite" teachers in most higher art colleges and universities, Art teachers' relatively single disciplinary background is common, and the lack of interdisciplinary cross-knowledge system. (Chen Quehong, 2024). Fourth, the utilisation of digital smart technologies by art educators remains at a comparatively low level, particularly in terms of their integration within teaching disciplines. (Cuan Lihan, 2023) Therefore, under the background of the construction of "New Liberal Arts", how to put limited resources into art teachers in colleges and universities accurately, reasonably organized and effectively utilized, in order to maximize the promotion of professional development of art teachers and to enhance their competence has become an important issue that needs to be urgently solved for the development of art teachers in Ningxia colleges and universities at present.

Teachers' professional development is the key to the success or failure of school development and educational reform, which can contribute to the implementation of educational policies through improved practice, enhance student learning achievement through improved teacher performance; and enhance the identity and status of the teaching profession (Day, C. & Sachs, J., 2004). Programs as a coherent set of activities designed to achieve a specific goal or objective. and proceed in a systematic and orderly manner. (Patton, M.Q., 2011) program development is a process in which objectives for the final product are laid out and achieved. It acts like a plan of action, outlining what must be done to reach an end

goal. (Boone, E.J., 1992). There is an urgency to develop a proven program to enhance the competence of art teachers in Ningxia's colleges and universities.

The development of the program can help Ningxia universities and art teachers clearly define the goals for the development of art teacher competence in the construction of "New Liberal Arts", clarify the specific direction and standards required to improve the competence of art teachers. This helps Ningxia universities and art teachers maintain consistency in direction during the program implementation, reducing the possibility of deviating from goals.

Through the development of the program, Ningxia universities can comprehensively consider the resources required to improve the competence of art teachers, such as funds, manpower, time, etc., and make reasonable allocation and arrangement. This helps to ensure that the program receives sufficient support during implementation, improving the success rate and effectiveness of the program.

The formulation and implementation of the program to enhance the competence of art teachers is an important component and support for the reform and development of art education in Ningxia universities. This helps to enhance the professional competence, educational and teaching abilities of art teachers in Ningxia universities, as well as the applicability of the "new liberal arts" education reform, providing better guarantees for the comprehensive development of students, promoting the deepening of art education reform in Ningxia universities, and promoting the sustainable development and progress of art education in Ningxia universities.

Therefore, this study precisely targets the analysis and organization of competence elements in the teaching performance activities of art teachers in Ningxia colleges and universities under the background of the construction of "New Liberal Arts", explores the competence status quo and the expected state of art teachers in Ningxia colleges and universities. Based on this, the researcher will create a program to improve the competence of art teachers in universities in the context of "New Liberal Arts", providing an effective and feasible program for Ningxia universities to enhance the competence of art teachers and strengthen the construction of the art teacher team.

Research Questions

1. What are the components of the competence of art teachers in university under the background of “New Liberal Arts”?
2. Which level are existent state, desired state, and priority needs of the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia?
3. What kind of a program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia?

Research Objectives

1. To investigate the components of competence of art teachers in university under the background of “New Liberal Arts”.
2. To explore existent state, desired state, and priority needs of the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.
3. To create a program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Research Significance

1. Theoretical significance

This study enriches the research on teacher competence by examining the competence composition and developmental programs of art teachers in Chinese colleges and universities from the perspective of the construction of a New Liberal Arts curriculum. In this way, it will provide experience and reference for subsequent researchers to conduct a multi-perspective study of teacher competence in colleges and universities.

2. Practical significance

1) Enhance the educational and teaching abilities of art teachers in universities and promote their professional development.

This study analyzes and summarizes the components of the competence of art teachers under the background of "new liberal arts", which is beneficial for art

teachers in universities to update their teaching concepts, improve their teaching skills, and provide strong support for the career development of art teachers in universities.

2) It helps to strengthen the construction of the teaching staff and has a positive impact on the professional development of art teachers in universities.

This study has practical value for university administrators to diagnose the teaching problems of art teachers in the construction of "new liberal arts". By implementing programs to improve the competence of art teachers, it helps to cultivate a high-quality and professional team of university art teachers, providing strong talent support for the development and progress of universities.

3) Promote the reform and development of "New Liberal Arts" education.

Adapt the competency composition of art teachers in universities to the requirements of the construction of "new liberal arts", scientifically formulate program plans to improve the competency of art teachers in universities, and strive to provide assistance for the construction of the university teacher team and the individual professional development of university teachers, thereby promoting the effective promotion and implementation of the "new liberal arts" construction policy.

Scope of Research

1. Scope of contents

1.1 Components of competence of art teachers in university consist of 5 aspects including:

1.1.1 Knowledge Literacy

1.1.2 Didactic Ability

1.1.3 Digital Literacy

1.1.4 Uphold fundamental principles and Break new ground

1.1.5 Moral education ability

1.2 Principles of art teachers development are 3 important learning principles:

1.2.1 70% learning through experience

1.2.2 20% Learning through others

1.2.3 10% Learning through courses

1.3 Methods of art teachers development include:

1.3.1 Self-learning from practical work

1.3.2 Assignment

1.3.3 Coaching

1.3.4 Job shadowing

1.3.5 Training

1.4 Components of the program include:

1.4.1 Principles

1.4.2 Objectives

1.4.3 Content

1.4.4 Development process

1.4.5 Evaluation

1.5 The process of creating a program to enhance competence of art teachers with the following steps:

1.5.1 Investigating the components of arts teachers competence.

1.5.2 Exploring the existent state, desired state and the priority needs for art teachers competence development.

1.5.3 Creating a program to enhance the competence of art teachers.

1.5.4 Evaluating the suitability and feasibility of the program to enhance the Competence of art teachers.

2. Scope of population and sample

Phase 1 Investigating the components of competence of art teachers in university under the background of New Liberal Arts.

There are 5 experts consisting of academics, educators, and educational administrators, evaluating the suitability of the components.

Phase 2 Exploring existent state, desired state and priority needs of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

1) Population includes educational institution administrators and art teachers from Ningxia universities and colleges. Ningxia University, North Minzu University, Ningxia Normal University, Ningxia Institute of Science and Technology, Yinchuan College of Science and Technology, Yinchuan College of Energy,

academic year 2024, including art teacher and administrators: 37 people, art teachers: 401 people, total:438 people.

2) The sample group includes educational institution administrators and arts teachers in universities and colleges in Ningxia, by comparing the total population with the prepared table of Krejcie and Morgan (1978) and using the stratified random sampling technique (Stratified Random Sampling Technique) to classify according to Job attribute, calculating the sample. In each layer Then use simple random sampling to get the sample. This resulted in a sample of 205 people, including 20 art teacher and administrators and 185 art teachers.

Phase 3: Creating a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

1) 5 experts consisting of academics, educators, and educational administrators provide the principles and methods for developing the Competence of art teachers through in-depth interviews.

2) 5 experts consisting of academics, educators, and educational administrators evaluate the suitability and feasibility of the program to enhance the competence of art teachers.

Conceptual Framework

1. Conceptual framework for the components of competence of art teachers

The study and synthesis of documents by academicians including: Wang Hui, & Deng Ying. (2023), Wang Qiang, & Lv Yang (2022), Chawang Siji (2020), Quan Shoujie, & Chen Xianghan (2023), Sun Jingxia (2021), Wan Hui (2023), Pan Zhuochao (2018), Farihin, F. (2022), Ngainan, Naim (2009), Apriliyanti, D.L. (2020), et al. And the study and synthesis of Policy texts including: Guiding Opinions on Strengthening the Reform of Higher Education Teaching Personnel Construction in the New Era (2020), Opinions on Comprehensively Deepening the Reform of Teacher Construction in the New Era (2017), Ten Guidelines for the Professional Behavior of College Teachers in the New Era (2018), Opinions on Strengthening the Construction of Young Teachers in Colleges and Universities (2012), Guiding Opinions on Deepening the Reform of the Teaching Title System in Colleges and Universities (2020), Opinions on Comprehensively Strengthening and Improving Aesthetic

Education in Colleges and Universities in the New Era (2020), Declaration on the construction of a New Liberal Arts curriculum, New Liberal Arts Research and Reform Practice program Guidelines (2021), Opinions on Accelerating the Construction of New Liberal Arts in Undergraduate Colleges and Universities (Jiangxi)(2021), Opinions on Accelerating the Construction of New Liberal Arts in Undergraduate Colleges and Universities (Jiangsu)(2023).

The researcher summarized the components of competence of art teachers in university under the background of the New Liberal Arts consists of 5 aspects: 1) Knowledge Literacy, 2) Didactic Ability, 3) Uphold fundamental principles and Break new ground, 4) Digital Literacy, 5) Moral education ability.

2. Principles of art teachers competence development

The study and synthesis of documents from academicians and educators on the concept of 70: 20: 10 learning model including McCall, M.W. et al., (1988), Mughal, Z. (2023), Taylor, D. H. (2017), Jennings, C. (2011, 2008), Samantha J. Johnson et al. (2018), Lombardo & Eichinger (1996), Joshi, M. (2018). The model consists of 3 important learning principles: 1) 70% learning through experience, 2) 20% learning through others, and 3) 10% learning through the courses.

3. Methods of art teachers competence development

The study conceptual from Loucks-Horsley, S.(1987), McBeath, C. (1997), Carette, B., Anseel, F., & Lievens, F. (2013), Shulman, L. S. (1986), Wiernek, B. & Gurrola, M. (2017), Mary Devine, et al. (2013), Epper, R.M.(1999), Ørngreen, R., & Levinsen, K.T. (2017), Pedler, M., Burgoyne, J., Brook, C. (2005), Olsson. A., et al (2010) and concluded that methods used in enhancing competence of art teachers in university under the background of the New Liberal Arts come in 5 forms: 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job shadowing and 5) Training.

4. Components of program to enhance competence of art teachers

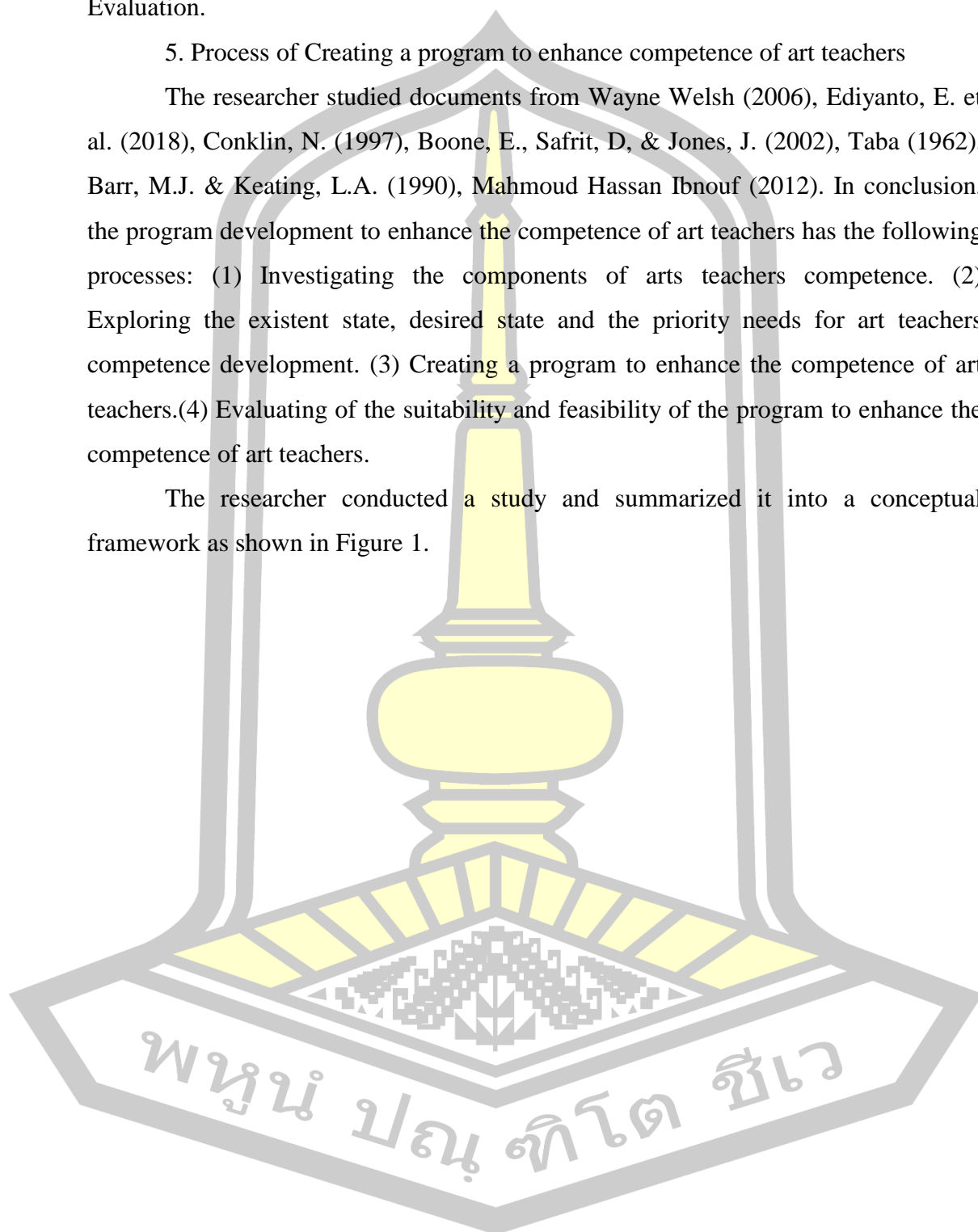
The researcher studied documents from Yves Kalberer (2024), Pimpaporn Pimpko (2014), Darling-Hammond, L., & Bransford, J. (2019), Kirkpatrick, D., & Kirkpatrick, J. (2006), Julsuwan, S. (2011), National minority aids council (2015), Olympic Training & Consulting (2016), in conclusion, the program has the following

elements: 1) Principles 2) Objectives 3) Content 4) Development process and 5) Evaluation.

5. Process of Creating a program to enhance competence of art teachers

The researcher studied documents from Wayne Welsh (2006), Ediyanto, E. et al. (2018), Conklin, N. (1997), Boone, E., Safrit, D, & Jones, J. (2002), Taba (1962), Barr, M.J. & Keating, L.A. (1990), Mahmoud Hassan Ibnouf (2012). In conclusion, the program development to enhance the competence of art teachers has the following processes: (1) Investigating the components of arts teachers competence. (2) Exploring the existent state, desired state and the priority needs for art teachers competence development. (3) Creating a program to enhance the competence of art teachers.(4) Evaluating of the suitability and feasibility of the program to enhance the competence of art teachers.

The researcher conducted a study and summarized it into a conceptual framework as shown in Figure 1.



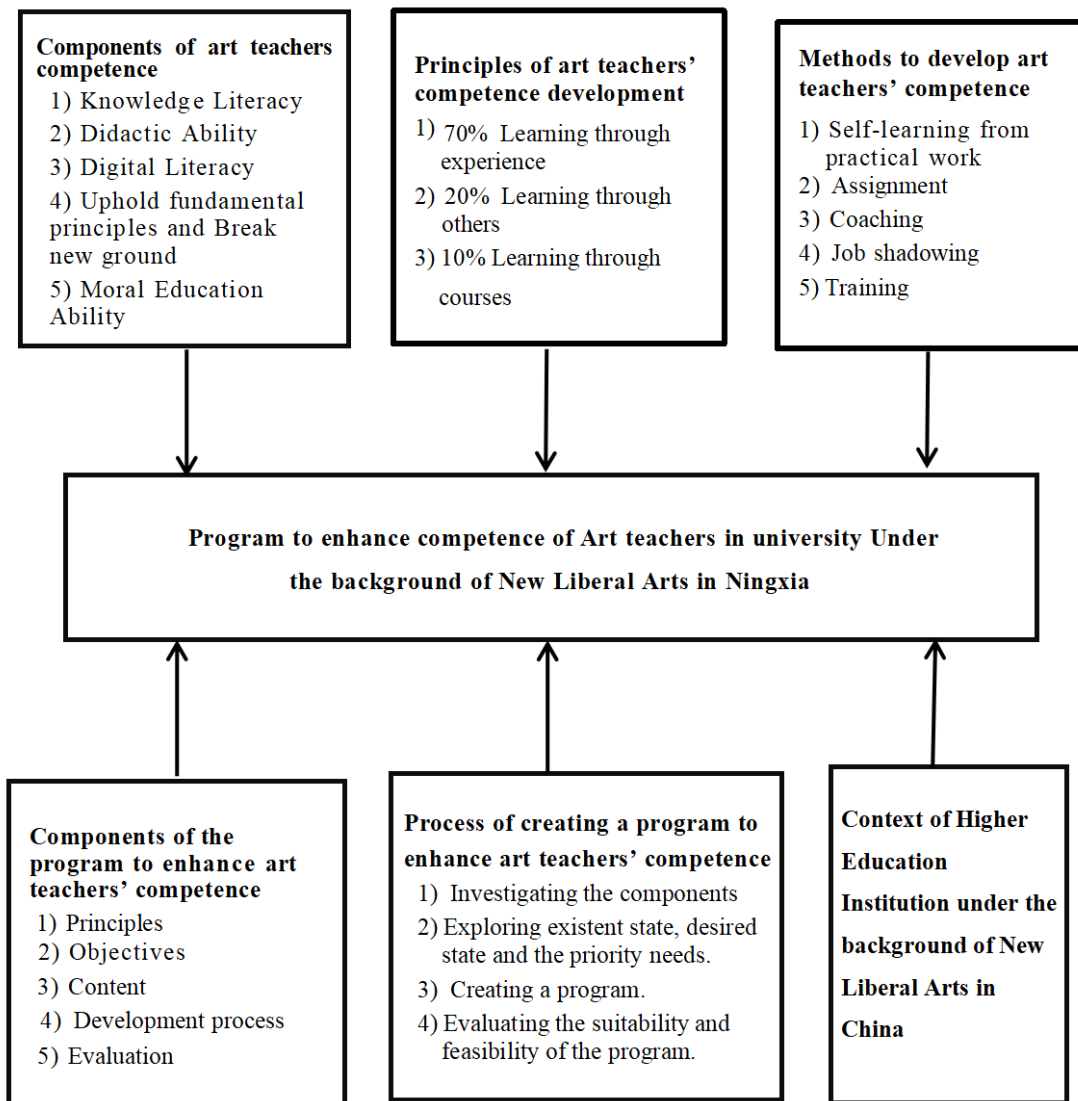
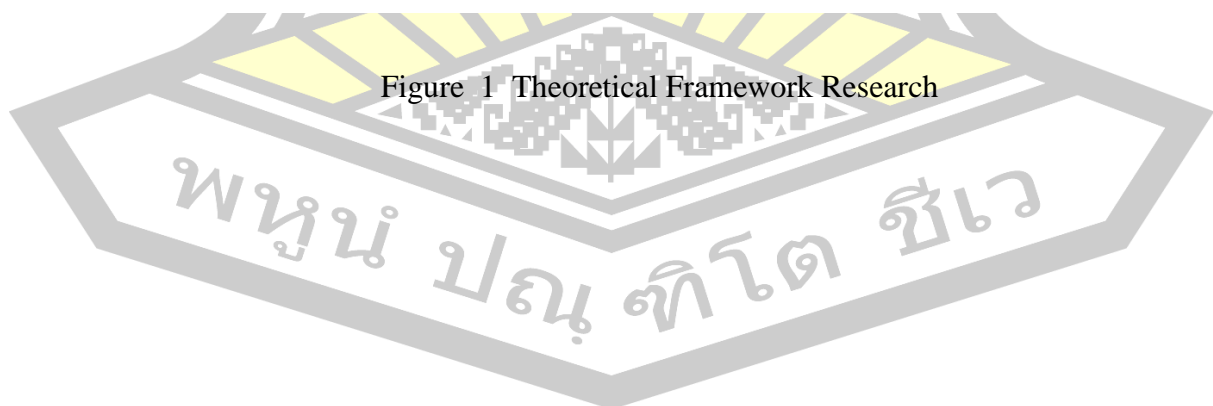


Figure 1 Theoretical Framework Research



Term Definition

1. Art Teacher competence refers to the professional knowledge, professional skills and professional values that individual art teachers possess in relation to the implementation of successful teaching, and it is a deep-level comprehensive trait containing knowledge, teaching skills, emotions, attitudes and internal motivation for teaching, and it is the manifestation of art teachers' practical knowledge, and it is the beliefs that are formed after correctly grasping the external things. It is a necessary condition for art teachers to engage in excellence in teaching and a major training goal of teacher education institutions. To deal with challenges that may arise to achieve the goals of the New Liberal Arts. which has 5 components:

1.1 Knowledge Literacy refers art teachers in university must have the multidisciplinary and cross-fertilised knowledge structure and knowledge crystals in order to apply to the requirements of the construction of new liberal arts. It includes professional knowledge of a subject, interdisciplinary knowledge literacy, basic theoretical knowledge of pedagogy, knowledge of the humanities, and creative practice knowledge. The organic combination of these knowledge constitutes the unique knowledge structure and ability system of art teachers in colleges and universities, reflecting the teachers' knowledge reserves in their professional fields, and providing a solid support for their teaching, scientific research and social service activities.

1.2 Didactic Ability refers art teachers in university have the ability to use advanced teaching concepts, guide students in their learning activities, complete teaching activities scientifically and effectively, and achieve teaching goals in the context of the new liberal arts, as well as the ability of teachers to manage the entire teaching process. It covers a variety of psychological and behavioral characteristics shown by art teachers in teaching activities, including teaching design ability, teaching implementation ability, teaching regulation ability and teaching evaluation ability.

1.3 Digital Literacy refers **Digital Literacy** refers art teachers in university have the ability to use digital tools and platforms to implement art teaching, scientific research and art creation activities, and to have the ability to reform and innovate the development of higher art education empowered by artificial intelligence.

It includes digital awareness, digital technology knowledge and skills, digital application and digital social responsibility.

1.4 Uphold fundamental principles and Break new ground refers to in the context of the new liberal arts, art teachers in university have the ability to adhere to the dialectical unity of inheritance and development, regularity and purpose when teaching and educating people. On the one hand, they can adhere to the truth, including adhering to the original mission of "educating people for the Party and educating talents for the country", following the objective laws of art education, and inheriting the fine traditions of art education. On the other hand, they can carry forward the spirit of innovation, expand the instrumental nature of art disciplines, and give new vitality to art disciplines through the social demand-oriented and practice-oriented cultivation of talents.

1.5 Moral education ability refers art teachers in university have noble teacher ethics and character, have the ability to educate people with morality and cultivate talents with moral character, so that they can better assume their responsibilities as teachers and guides. Moral education ability emphasizes the ability of art teachers to insist on moral education as the first priority, stresses the ability of art teachers to adhere to the "people-centred" principle, to take students as the centre of teaching and learning, to cultivate students' knowledge and practical abilities, and to shape and develop artistic talents that meet the needs of the times. Moral education ability involves the charisma of the teacher and the emotional dynamics of teaching.

2. The 70:20:10 learning principle refers to the emphasis on the integration of formal learning, experiential learning, and social learning in improving the competence of art teachers, and improving competence through three forms: 1) 70% learning through experience, 2) 20% learning through others, and 3) 10% learning through courses.

3. Methods of art teacher development refer to ways and means to help art teachers improve their competence and professional development through a series of systematic strategies, activities and practices. These methods are designed to promote the continuous improvement of art teachers in terms of knowledge, skills, attitudes and values to adapt to changes in the educational environment and the needs of students.

3.1 Self-learning from practical work refers to the process in which art teachers are required to actively guide their own learning process, determine their own learning goals and be responsible for their own learning goals without formal or structured guidance. This learning style allows individuals to effectively apply learning skills driven by their own desires and needs.

3.2 Assignment refers to the assignment of personnel to specific jobs on a case-by-case basis or the assignment of specific tasks to personnel, which may be short-term, long-term, full-time or part-time, based on a variety of factors, including an individual's skills, experience and availability, as well as the nature and requirements of the task, in accordance with actual needs. Work assignment is an important concept at both the organisational and individual levels, helping to ensure that resources are used efficiently and contributing to the achievement of individual and team goals.

3.3 Job shadowing refers a vocational training method that allows learners to familiarise themselves with the specific job content, responsibilities, skills required and working environment of a particular occupation or position by following and observing experienced employees carrying out day-to-day tasks. The advantage of this method is that it allows learners to gain a deeper understanding of the actual operation of a particular occupation or position, so that they can better assess its suitability and build up relevant work experience and skills.

3.4 Coaching refers to a comprehensive, systematic and personalised coaching process, in which the coach plays the role of a guide and supporter, listens, asks questions, gives feedback, emphasises the individual's intrinsic motivation and self-worth, encourages coaches to take the initiative to think, self-reflect and learn continuously, and helps them to clarify their goals, formulate plans, solve problems and overcome obstacles. This process focuses not only on the personal growth of the coaches, but also on the overall effectiveness of the team.

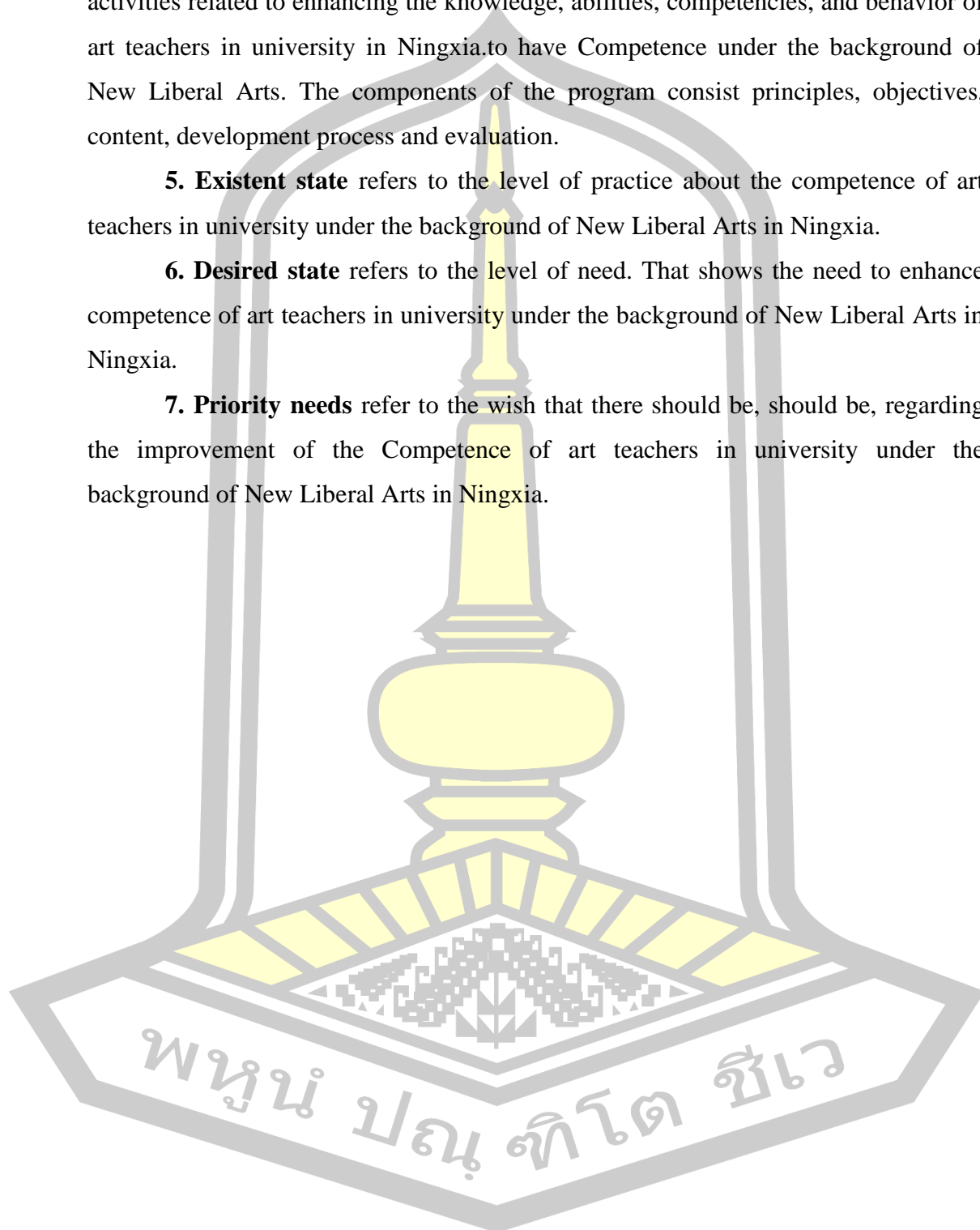
3.5 Training refers to the formulation of individualised training plans and formal curricula according to the needs and characteristics of art teachers, and the enhancement of art teachers' professional abilities, teaching standards and overall quality through systematic teaching activities, seminars, lectures and other forms.

4. Program to enhance Competence of art teachers refers to a set of activities related to enhancing the knowledge, abilities, competencies, and behavior of art teachers in university in Ningxia. to have Competence under the background of New Liberal Arts. The components of the program consist principles, objectives, content, development process and evaluation.

5. Existent state refers to the level of practice about the competence of art teachers in university under the background of New Liberal Arts in Ningxia.

6. Desired state refers to the level of need. That shows the need to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

7. Priority needs refer to the wish that there should be, should be, regarding the improvement of the Competence of art teachers in university under the background of New Liberal Arts in Ningxia.



CHAPTER II

LITERATURE REVIEW

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 - 1.2 Competence theory
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 - 2.1 Meaning of art teachers' competence
 - 2.2 Components of Competence of Art Teachers
3. Concept and Theory of Teacher Development
 - 3.1 Adult Learning Theory
 - 3.2 Definition of Teacher Development
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 - 4.1 Definition of the program
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5. Context of higher education institution under the background of New Liberal Arts
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6. Related Research

Competence Theory

Competence is one of the most pervasive concepts widely used in policy documents in the OECD and European Space of Higher Education. Following The Definition of the European Commission (2019): Competences are a combination of knowledge, skills and attitudes; knowledge is composed of the concepts, facts and figures, ideas and theories which are already established, and support the understanding of a certain area or subject; skills are defined as the ability to carry out processes and use the existing knowledge to achieve results, and attitudes describe the disposition and mindset to act or react to ideas, persons or situations (Maria Alfredo Moreira, 2023).

Teachers competence is the support point for teachers' professional growth. It is a specialized term produced by the emergence of the international trend of teachers' professional specialization, the development of the complexity of educational activities and the reevaluation of educational value function. It has the characteristics of individuality, situation, innovation and development.

1. Definition of Competence

In the 1970s, Taylor's theory was largely discredited, and people increasingly questioned talent assessment theories centred on intelligence assessment. Harvard professor McClland, D.C. (1973) published his landmark article Testing for competence rather than for intelligence, which put forward the concept of competence, stating that the previous intelligence tests should be discarded and replaced with competence traits. It was further pointed out that the raw data obtained from the Key Behavioral Interviews (KBIs) should be analyzed in order to find out the personal characteristics and behavioral traits that can directly respond to the relationship between job performance, so as to enhance the performance of the organization as a whole as well as to drive the success of the individual's job to play its due ability. The theoretical research and application of competence immediately set off a frenzy in the United States, Britain, Canada and other Western countries, and became a cutting-edge management concept in the 1980s. (Jin Jing, 2021)

There are still differing views on the definition of competence.

McClland, D.C.(1973) defined competence as: competence is "knowledge, skills, attributes, or motivations that are directly similar to or related to work or job

performance or other important outcomes in life; it is a personal trait that can be empirically verified, is difficult to fake or imitate, and distinguishes high performers from average performers".

Boyatzis, R.E. (1982, 1994) defined competence as: competence as any trait possessed by an individual that leads to outstanding performance in a job or life role, an underlying characteristic of the individual, which may be a motivation, trait, skill, self-image, or social role, or other entity of knowledge used.

Lylem Spencer (1993) defined competence as: competence is an individual, underlying, deep-rooted characteristic that distinguishes a high performer from an average performer in a job (or organization, culture), including It may be motivation, traits, self-image, attitudes or values, knowledge of a particular domain, awareness or skills-Any trait that can be measured or counted. -Any individual characteristic that can be measured or counted and that significantly distinguishes good performance from average performance.

McClelland, D. C. (1998) defined competence as: competence are motivations, traits, self-concept, attitudes, values, knowledge, identifiable behavioral skills and personal attributes that can be credibly measured to distinguish high performers from average performers.

German scholar Weinert, F.E. (2001) defined competence as: competence as a multidimensional structure of abilities to perform occupational tasks well, including a wide range of cognitive abilities, motivation, will, and social competence in work-related environments.

Speneer Jr. LM., & Spencer, S.M. (1993) defined Competence refers to the underlying, deep-seated individual characteristics that distinguish outstanding performers from average performers in a given job (or organization, culture). These can include motives, traits, self-image, attitudes or values, as well as knowledge, cognitions, and behavioral skills in a particular domain. Importantly, they can be reliably observed and measured and significantly differentiate between individuals with excellent and average performance. He believes that competence traits consist of five main dimensions: individual knowledge, personal skills, self-concept, social roles, and activity traits, which constitute a combination of competence traits, and are also closely related to an individual's job performance.

From the different definitions of the concept of competence, we can see that the content of competence mainly includes the following aspects: (1) Knowledge, refers to the individual in a particular field of transactional and experiential information, such as the understanding of the marketing strategy of a certain type of product, etc.; (2) Skills, refers to the individual's ability to master and use specialized technology, such as business planning ability, etc.; (3) Social roles, refers to the individual's perception and understanding of social norms, such as the business leadership of the company; (4) Self-esteem, that is, the individual's perception and evaluation of their own identity, such as they regard themselves as an authority, a coach, a participant or an executor, etc., which is manifested in the individual's attitudes, values, and self-image; (5) Traits, refers to the individual's personality, psychological traits of the environment and the various kinds of information on the expression of the usual response, such as Good listening, cautious, persistent, etc.; (6) Motivation (need), that is, to promote the individual to achieve a certain goal and take action, such as the desire to do their own thing, the desire to control others, and the desire to let others understand and accept themselves, and so on.

Regardless of how scholars define competence, there are three main factors that they emphasize:

(1) Competence is closely linked with the specific jobs and responsibilities, the work situation, the nature of the work, the organizational culture often has a greater impact on competence, at the same time, the main use of competence is relatively stable staff, therefore, competence is a dialectical unity of dynamism and relative stability. Excellent and average performers can be predicted.

(2) Competence includes not only the behavioral surface factors for accomplishing job performance, such as knowledge and skills, but also the potential characteristics of the individual, such as traits, Self-esteem or social roles, and motivation;

(3) Competence is closely related to job performance, and the assessor can effectively distinguish high performers from low performers through the assessment of competence, and even predict the future job performance of employees.

In summary, from studying the meaning of competence, it can be concluded that competence is the individual psychological traits or personality traits that enable a person to perform a certain activity successfully. Competence is a combination of knowledge, skills and other external obvious qualities as well as internal implicit qualities such as values and

self-concept that can effectively distinguish between high-performing and low-performing workers in a certain job position. It is countable and measurable and is a relatively dynamic development process.

2. Competence Theory

From the above concept, we can see that the basic content of competence actually contains two major parts, one is external and easier to identify the part, and the other part is hidden, not easy to be perceived, difficult to measure and examine. competence Model also known as competence Characteristics Model and competence Quality Model, refers to a series of combinations of different competence elements that are designed to complete a certain job or reach a certain performance goal. Among the existing competence models, the iceberg model, the onion model, and the competence dictionary are the three classic competence modelling systems. competence models are often used in a variety of human resource fields and can be used in a range of human resource management programs such as employee selection, appraisal, and performance management.

2.1 Competence Iceberg Model

Competence iceberg model is a famous model proposed by McClellan, D.C. (1973), which is used to comprehensively describe all the elements of a person's value and is regarded as the basic model of competence. The model compares employee competence to an iceberg floating in water, and it divides competence into two parts, "above water" and "below water", with "above water" competencies including Knowledge and skills, are visible explicit characteristics, easy to understand and measure, relatively easy to change and develop through training, called Threshold Competence; "under the water" submerged in the deep part of the ability to quality, including personality traits, self-image, values, attitudes and motivation, etc., not easy to measure and assess. The "underwater" deep-seated competencies, including personality traits, self-image, values, attitudes, and motivation, are not easy to measure and evaluate, and difficult to change through training, but they are the key factor in distinguishing between excellent and mediocre performers, and are the core factor in judging a person's future performance, and are called Differentiating Competence. competence iceberg model is a famous model proposed by McClellan, D.C. (1973), which is used to comprehensively describe all the elements of a person's value and is regarded as the basic model of competence. The model compares employee competence to an iceberg floating in water, and it divides competence into two

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Spencer, S.M. (1993) further modified McClellan's "iceberg model" and proposed a "new iceberg model" based on it, in which the original six dimensions were changed to five, from the bottom to the top of which are the motivation, personality (the sum of certain tendencies and stability of psychological traits of an individual) and self-image in the underwater part, and the skills and knowledge in the above part. Motivation, personality (the sum of individual psychological traits with certain tendencies and stability) and self-image, and skills and knowledge in the aquatic part. In fact, there is no change in the connotation of the old and new iceberg models, the surface part of the iceberg remains the same, only that the latter has appropriately integrated the content below the iceberg of the former.

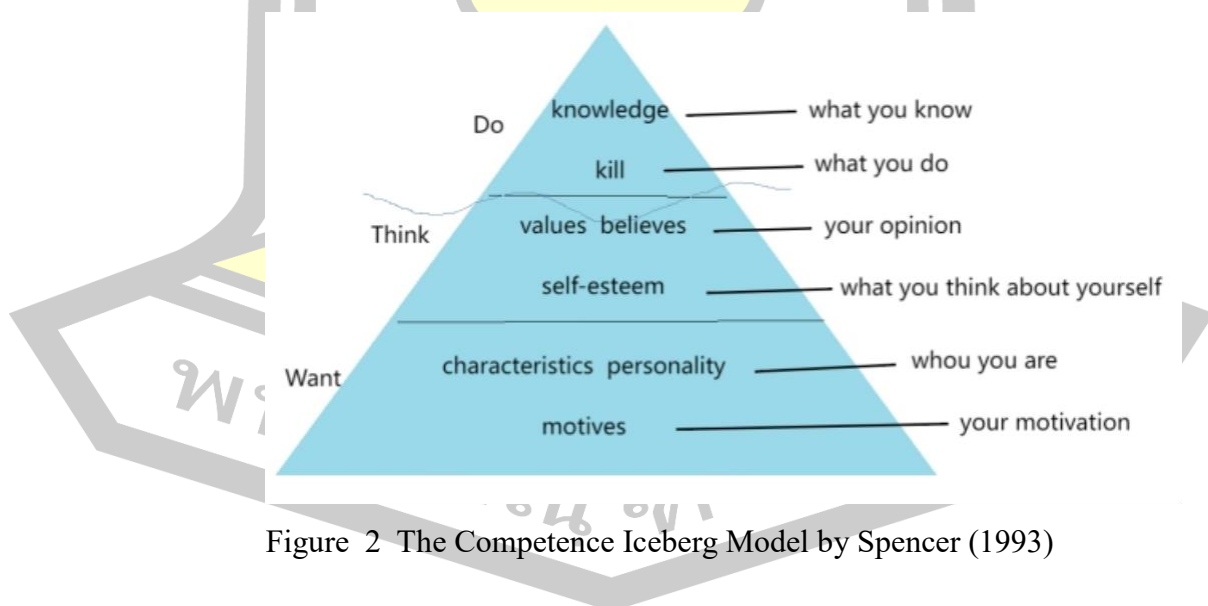


Figure 2 The Competence Iceberg Model by Spencer (1993)

2.2 Competence Onion Model

The "onion model" is evolved based on the "iceberg model", which can be said to be an interpretation of the "iceberg model" from another perspective. American

scholar Richard E. Boyatzis (1982) conducted in-depth research on McClellan's "Iceberg Model" and put forward the famous "Onion Model", which figuratively summarizes competence as a three-layered structure wrapped in layers, showing that each level has its own structure. This model summarizes competence from the inside out as a three-layered structure, showing the observable and measurable characteristics of each layer. From the outside to the inside, the first layer is the knowledge and skills in the outer layer of the onion, which is equivalent to the water part of the iceberg in the "iceberg model"; the second layer in the middle of the onion consists of social roles and values, and self-image, which is the individual's knowledge of the social group or organization to which he belongs, and his own knowledge and understanding, which is equivalent to the "iceberg" in the "iceberg model". "The second layer in the middle of the onion consists of social roles, values and self-image, which is the individual's knowledge of the social group or organization he/she belongs to, and his/her knowledge and understanding of himself/herself, and is equivalent to the shallow underwater part of the iceberg; the innermost layer of the onion, which consists of the motivation and attributes, is the core of the whole model, and is the individual's competence at the deepest level, and is equivalent to the deepest part of the iceberg. In the "onion model", the competence traits are progressive and in-depth from the outside to the inside, from the surface to the inside. The more the competence traits are in the outer layer, the easier it is to measure and cultivate them; and the more the traits are in the inner layer, the deeper they are hidden, and the more difficult it is to evaluate and acquire them.

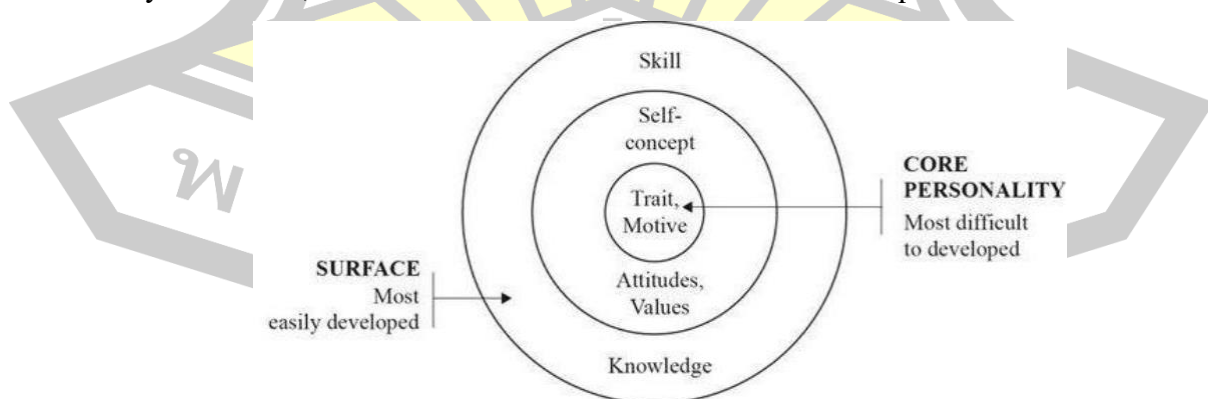


Figure 3 The Competence Onion Model by Richard Boyatzis (1993)

In summary, the "onion model" and the "iceberg model" express basically the same connotation of competence, both emphasize the core and basic qualities, and the core qualities (attitude) have a great impact on the long-term performance of individuals. However, the Onion Model is more hierarchical and provides a more intuitive representation of the relationship between competence characteristics and the degree of difficulty in obtaining them.

Competence of Art Teachers

With the boom of competence research, the use of competence is not only limited to human resource management, but also gradually began to be used in education research and practice. Competence research in education can be traced back to the mid-20th century, the earliest is the research on the competence of education administrators, with the U.S. Federal Education Administration advocating the "competence-based teacher education" as the starting point, requiring targeted training on the competence of teacher candidates. 1990s, China initially introduced the concept and model of competence, which is mainly applied to enterprises, education, and other industries.

1. Meaning of Art Teachers Competence

Maria Alfredo Moreira (2023) pointed out currently, the prevailing narrative in higher education is a competence-based approach, where high quality education means that teachers must be equipped with the competence to effectively perform their teaching tasks, including personal, research and pedagogical skills.

At present, scholars at home and abroad do not have a standard definition of the connotation of teacher competence. From the perspective of previous studies, scholars at home and abroad have explored the characteristics of teacher competence from different angles:

Tyler, F.T. (1960) believes that teachers with competence characteristics should promote students to get the maximum improvement and get the recognition of colleagues, leaders and students.

Liu Jingyi, & Wu Xiulin (2022) defined teacher competence refers to the combination of a teacher's personality traits, knowledge, teaching skills and teaching attitudes required in different teaching contexts. It is a kind of professional knowledge,

professional skills and professional attitudes or values that individual teachers possess and are related to the implementation of successful teaching.

Tigelaar, D.E.H., & Vleuten, CPMVD. (2004) believed that college teacher competence is a combination of personality traits, knowledge, and teaching skills and attitudes needed in the context of teaching college teachers. They suggested that teacher competence is a combination of personality traits, subject matter knowledge, pedagogical skills, and attitudes of individual teachers

Carl (2000) suggested that teacher competence refers to the professional knowledge, skills, and values of individual teachers as they relate to the delivery of successful teaching and learning.

Hattie John, A. (2009) through a cluster analysis of more than 800 meta-analyses and a survey of millions of students, aimed to examine the most important teacher attributes that influence student achievement. The results suggest that high levels of commitment and personal competence are key characteristics of teacher competence.

Scholars in China have also put forward their own opinions on the meaning of teacher competence.

Xu Peiyuan, & Guo Rong (2022) defined teacher competence refers to any potential, deep-seated characteristics of individuals that can be reliably measured or counted, which can distinguish outstanding teachers from mediocre ones.

Xing Qiang, & Meng Wei-Qing (2003) pointed out that teacher competence is an individual characteristic of teachers, the professional knowledge, teaching skills and values that teachers must have to carry out successful teaching, and it is an important goal of the training of teachers in educational institutions.

Tang Shujun, & Liu Ya (2010) explained the meaning of competence of higher education teachers can also be understood as the intrinsic traits and underlying factors that lead to excellent research results and significant teaching performance of higher education teachers.

Xu Jianping (2004) suggested that teacher competence refers to those intrinsic traits that differentiate high performing or high performing teachers from average teachers in daily school teaching work.

Cai Xiaojun (2009) defined the competence of college teachers as: professional knowledge, ability, work, motivation, self-image, social role or personal characteristics

directly related to teaching or scientific research achievements, which are the decisive factors for individuals to take successful action in.

The standard definitions of teacher competence from domestic and international academics can be categorized into the skill-centred concept of teacher competence and the quality-centred concept of teacher competence. In a nutshell, the connotation of teacher competence is multi-dimensional, multi-level and cross-professional. In terms of concepts and research contents, there are also differences between Chinese and foreign scholars in the following two aspects: Firstly, in terms of concepts, some scholars refer to teacher competence as professional qualities or qualities, some refer to it as ideal teachers' qualities, and some refer to it as ideal teachers' personality traits; secondly, in terms of research contents, some favors traits and some favors behaviors, and various scholars have dealt with them. Secondly, in terms of the content of the research, some focus on traits and some on behaviors, and the connotations of the concepts of teacher quality and teacher competence involved by various scholars are not exactly the same.

Despite the different studies on teacher competence by various scholars, the following three consensuses were reached on the characteristics of competence: firstly, it is dynamic as it is related to a specific job; secondly, it is developmental as it is referenced to performance standards; and thirdly, it is diverse as it contains a set of personal characteristics, potential traits or behaviors, such as knowledge, skills, self-concepts, traits, and motivation.

In summary, from studying the meaning of teacher competence, it can be concluded that art teacher competence refers to the professional knowledge, professional skills and professional values that individual art teachers possess in relation to the implementation of successful teaching, and it is a deep-level comprehensive trait containing knowledge, teaching skills, emotions, attitudes and internal motivation for teaching, and it is the manifestation of art teachers' practical knowledge, and it is the beliefs that are formed after correctly grasping the external things. It is a necessary condition for art teachers to engage in excellence in teaching and a major training goal of teacher education institutions.

2. Components of Competence of Art Teachers

The components of art teacher competence in colleges and universities in the New Liberal Arts context were extracted and identified in two main ways, one is to analyze and summarize literature on the competence research of higher education

teachers or art teachers, which serves as a common basis for the competence components of art teachers in university; and the other is to analyze and summarize relevant Chinese higher education policy texts, which serves as the heterogeneous components of competence of art teachers in university under the background of New Liberal Arts.

2.1 Literature-based Component of competence of Art Teachers in University

Wang Qiang, & Lv Yang(2022) in the study on research on the Layered Employment Standard and Multiple Evaluation Mechanism of "Double-Qualified" Teachers in Art Design Based on Competence, proposed that the competence of art faculty in higher education include:

(1) Theoretical knowledge Teaching ability to effectively deliver instruction in art and design-related disciplinary knowledge.

(2) Practical skill guidance quality to proficiently guide students in technical skill training and practical exercises related to art and design.

(3) Didactic innovation ability to innovate in art and design pedagogy, develop specialized programs, and advance teaching reforms by translating the latest knowledge and technical skills into educational resources.

(4) Practice innovation quality to innovate in art and design, advance technical skill development, and implement industry-education integration practices to facilitate the updating of knowledge and technical skills.

Pan Zhuochao (2018), in the study on constructing evaluation indicators for art university teachers, proposed that the competence of art faculty in higher education include:

(1) Didactic ability including: teaching planning, teaching content and materials, teaching implementation and methods, teaching outcomes, continuous growth and basic requirements.

(2) Scientific research ability including: paper publications, monographs, research projects, research awards, academic participation

(3) Art creative Ability including: awards for creative works, contribution of creative work to teaching and research, innovativeness, artistic quality, and depth, dissemination and influence of creative outcomes, creative benefits.

(4) Service ability including: departmental service, university-level service,

external service.

Wang Hui, & Deng Ying (2023) discussed the components of Teacher Competence in Higher Education. Which consists of 4 components:

- (1) Knowledge dimension refers to the scope of knowledge that teachers should possess.
- (2) Didactic ability dimension refers to the scope of competences that teachers should possess.
- (3) Professional quality dimension refers to the moral qualities and values of teachers.
- (4) Personal characteristics dimension refers to the continuous and stable individual behavior of teachers.

Chawang Slji (2020) discussed the elements of Teacher Competence in Higher Education. Which consists of 4 components.

- (1) Knowledge literacy refers to the fact that teachers, in order to carry out their teaching work, must master profound professional knowledge and broad general knowledge, realize the unity of the breadth and depth of knowledge, and carry out teaching in combination with the cutting-edge knowledge of their own specialties, so as to enable students to learn something.
- (2) Didactic Ability refer to the solid and complex system of teaching behaviors formed by teachers through practice using existing theoretical knowledge of teaching.
- (3) Professional ethics refers to learning as a teacher, behavioral model, university teachers should have noble moral sentiments, high aspirations, caring.
- (4) Personal Characteristics refers to the sum of a number of relatively important and fairly long-lasting psychological characteristics, the sum of temperament, ability, interest and character and other psychological characteristics gradually formed on the basis of a person's personal physiology.

Quan Shoujie, & Chen Xianghan (2023) discussed the elements of Teacher Competence in Higher Education. Which consists of 4 components.

- (1) Knowledge Literacy refers to the various kinds of knowledge and structures that teachers need to have for teaching

(2) Didactic Ability refers to a behavioral characteristic expressed in teaching activities such as teaching design, teaching implementation, teaching evaluation and teaching research.

(3) Professional Quality refers to professional attitude, professional emotion, professional self-efficacy, and professional pursuit.

(4) Personality Traits refer to self-characteristics and interpersonal characteristics.

Sun Jingxia (2021) discussed the elements of Teacher Competence in Higher Education. Which consists of 5 components.

(1) Teacher-student intimacy refers to students building a good relationship with and trusting the teacher.

(2) Didactic Ability refer to the teaching methods and resources used by the teacher in the lesson

(3) Professional Knowledge refers to the teacher's knowledge structure and the content of the lessons.

(4) Teaching Style refers to the unique teaching characteristics and personalized teaching performance of the teacher in teaching activities.

(5) Stimulate Interest refers to the teacher's ability to attract students' attention and stimulate their interest in learning.

Xu Weiming, Deng Guoqiong, & Jiang Ruijie (2023), in their study on the construction and application of a multidimensional evaluation system for art teachers, identified the following competence for art teachers:

(1) Teacher's (Professional) ethics refers to the art teacher's responsibility to uphold the mission of transmitting artistic traditions, fostering aesthetic education, and promoting cultural cultivation. Political awareness must be prioritized as a fundamental requirement.

(2) Didactic and educational ability includes teaching quality, pedagogical innovation, and educational outcomes. Art disciplines emphasize a stronger practical focus in the teaching process.

(3) Scientific research ability encompasses research projects, academic papers and monographs, and technical patents.

(4) Social service ability divided into two aspects: campus-based service and off-campus service.

(5) Professional development includes advancing academic qualifications (degrees), obtaining professional certifications, participating in industry internships, and domestic or international academic exchanges.

Farihin, F. (2022) discussed Teacher competencies as a requirement for achieving synergetic effects in students are thus organized into 4 components:

- (1) Didactic Ability refers to mastering know ledge and teaching skills
- (2) Personal Ability refers to the excellent personality traits and self-development abilities that an individual possesses.
- (3) Professional Ability refers to mastering the field of science substantially and syntactically
- (4) Social Ability refers to communicating and getting along with students, colleagues, and the community.

Ngainun, Naim (2009) discussed the elements of Teacher Competence in Higher Education. Which consists of 4 components.

- (1) getting to know students in-depth
- (2) Knowledge Literacy refers to have a good command of the field of study, both in the content of the respective discipline and teaching materials of the school curriculum.
- (3) Didactic Ability refers to implement teaching and learning, comprising of planning and implementation, evaluation of the process and outcomes, as well as follow-up for improvement and enrichment.
- (4) Develop personality and professionalism

Apriliyanti, D.L. (2020) discussed the elements of Teacher Competence in Higher Education. Which consists of 4 components.

- (1) Didactic Ability refers to the ability to plan the learning activity, to manage the learning activity and evaluating the learning activity.
- (2) Personal Characteristics refers to the capability of a stable personality, noble, wise and dignified as well as being exemplary learners which cover teachers' personality as role models and inspirations

(3) Social Ability refers to the capability of teachers to communicate and interact effectively and efficiently with learners, fellow teachers, parents/guardians of learners, and school community.

(4) Professional Ability refers to the capability of subject mastery widely and deeply, which cover teachers' professions as academic figures.

From the perspective of the academics mentioned above the researcher has analyzed the important components of teacher competence in higher education. As shown in Table 1.

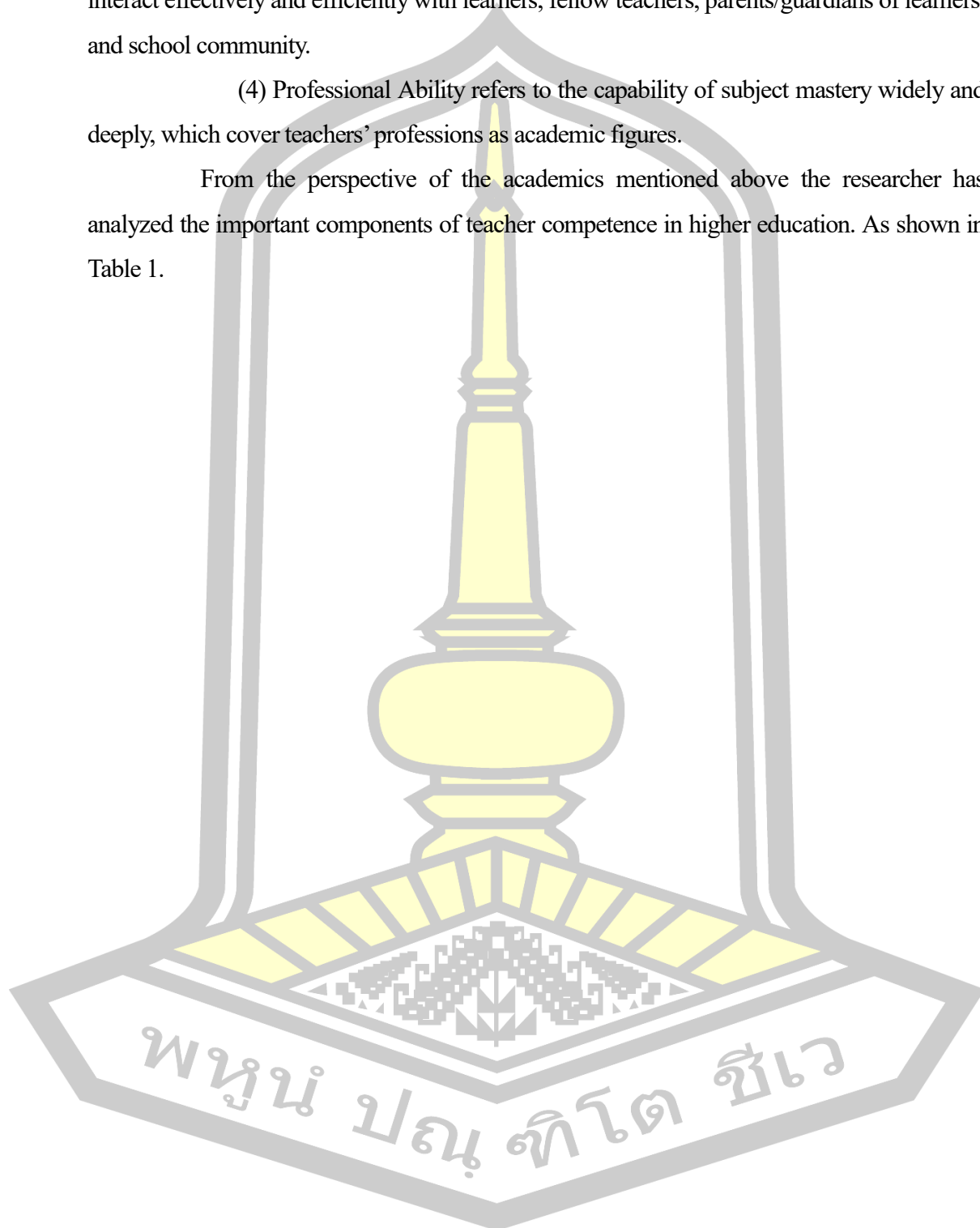


Table 1 Analyzes the components of teacher competence in higher education

Components	Scholar										Total
	Xu Weiming (2023)	Wang Qiang(2022)	Chawang Siji(2020)	Quan Shoujie(2023)	Sun Jingxia (2021)	Wang Hui(2023)	Pan Zhuochao(2018)	Farihin (2022)	Ngainan ,Naim(2009)	Apriliyanti(2020)	
1.Knowledge literacy		√	√	√	√	√			√		6
2.Didactic ability	√	√	√	√		√	√	√	√	√	9
3.Personal characteristics			√	√		√		√		√	5
4.Professional competence								√		√	2
5.Practical skill guidance quality		√									1
6.Social sevice ability	√						√				2
7.Scientific research ability	√						√				2
8. Digital literacy					√						1
9.Practice innovation quality		√									1
10.Teacher's(Professional) ethics	√		√								2
11.Professional quality				√		√					2
12.Teacher-student intimacy					√						1
13.Teaching style					√						1
14.Stimulate interest					√						1
15.Artistic creation ability							√				1
16.Social competence								√		√	2
17.Getting to know students in-depth									√		1
18.Develop personality and professionalism	√								√		2
Total	5	4	4	4	5	4	4	4	4	4	42

From table 1, according to the theoretical framework, the researcher used this criterion to consider variables with frequencies from 6 or higher, synthesizing the components of teacher competence in higher education from various academics, the researcher concludes that there are 2 components of art teacher competence in higher education: (1) Knowledge literacy, and (2) Didactic ability.

2.2 Policy Texts -based Component of competence of Art Teachers in Colleges and Universities

Policy texts, as statutory texts, have an irreplaceable influence in guiding the professional development of teachers in new engineering disciplines (Jiang Tao, 2018).

In this study, the researcher firstly visited the official website of the Ministry of Education of China to look for policy texts related to "college teachers" and "new liberal arts", and collected and collated eight policy documents as the study sample; secondly, the study selected opinions on the construction of new liberal arts formulated by Jiangxi and Jiangsu provinces as a supplement to enrich the study sample.

These research samples are from the official website of the Chinese Ministry of Education or the websites of provincial education departments, covering all the important textual policies about college teachers and the construction of new liberal arts issued since the new era, which is authoritative, complete, and rich in characteristics. Based on this, the keyword coding method was used to analyze the contents of the research samples related to the demand for liberal arts talents and the development needs of liberal arts teachers, and to extract a number of qualities of competence for teachers of new engineering disciplines. As shown in Table 2.

Table 2 Keywords Based on Policy Texts Analysis

Policy texts	Keywords
Guiding Opinions on Strengthening the Reform of Higher Education Teaching Personnel Construction in the New Era (I) (2020)	Ideological and Political Literacy, Information Technology Knowledge, Teacher Ethics, Moral Integrity, Research Ability, Practical Ability, Innovation Ability
Opinions on Comprehensively Deepening the Reform of Teacher Construction in the New Era (II) (2017)	Ideological and political literacy, teacher ethics , moral integrity, love of duty, dedication to work and cultivation of virtue, social responsibility, informatization, cultural self-confidence, sense of well-being, professional competence, teaching ability, creativity, two-way communication, physical and mental health, work ethic

Table 2 (Continued)

Policy texts	Keywords
Ten Guidelines for the Professional Behaviour of College Teachers in the New Era (III) (2018)	Political orientation, patriotism and law-abiding, excellent culture, didactic ability, moral integrity, love and care for students, elegance in speech and behavior, observance of the Code of Conduct for Teachers, rigorous governance, fairness and honesty, integrity and self-discipline, and dedication to society.
Opinions on Strengthening the Construction of Young Teachers in Colleges and Universities (IV) (2012)	Ideological and political quality, teacher ethics, professional pursuit, dedication, sense of responsibility, observance of professional ethics of teachers, educational and didactic ability, scientific research ability, practical ability, social service ability, innovation ability
Guiding Opinions on Deepening the Reform of the Teaching Title System in Colleges and Universities (V) (2020)	Virtue-based, teaching-oriented, ideological and political, teacher ethics, didactic ability, representative achievements
Opinions on Comprehensively Strengthening and Improving Aesthetic Education in Colleges and Universities in the New Era (VI) (2020)	Establishing moral values, educating people with beauty, beautifying people, cultivating people with beauty, ideological and political qualities, integration of disciplines, didactic qualities, ability to nurture people, professional ethics
Declaration on the Construction of New Liberal Arts (VII) (2020)	Innovative Development, Uphold fundamental principles and Break new ground, Cultural Confidence, Cross-fertilization Development, Based on National Conditions, Social Service, Modern Information Technology, Lifelong Learning, Chinese Characteristics, Integrity and Innovation, Value Leadership, Chinese School of Thought, Curriculum Civics, Integration Capability, Professional Optimization, Practical Innovation, Quality Culture.
New Liberal Arts Research and Reform Practice program Guidelines (VIII) (2021)	Chinese characteristics, traditional culture, innovative development, curriculum ideology, political identity, national sentiment, cultural literacy, awareness of the rule of law, moral cultivation, moral education, multidisciplinary cross-fertilization, information technology, practical ability, cultural quality
Opinions on Accelerating the Construction of New Liberal Arts in Undergraduate Colleges and Universities (Jiangxi) (IX) (2021)	Virtuosity, Knowledge Structure, Didactic Ability, digital information, Interdisciplinarity, Social Appeal, Cultural Shaping, Uphold fundamental principles and Break new ground
Opinions on Accelerating the Construction of New Liberal Arts in Undergraduate Colleges and Universities (Jiangsu) (X) (2023)	Lifelong learning, interdisciplinary cross-fertilization, distinctive culture, digital information, innovative parenting model, Uphold fundamental principles and Break new ground

From table 2, the researcher extracted keywords related to the competence of teachers in the New Liberal Arts from the policy text through generalization and

organization, and merged words with similar meanings, for example, "teacher ethics", "virtue first" and "cultivating virtue", "excellent culture", "traditional culture" and "cultural confidence", resulting in 13 key terms: 1) Cultivat emoral qualitués ability, 2) Ideological and political literacy, 3) Innovation ability (Uphold fundamental principles and Break new ground), 4) Didactic ability, 5) Social service ability, 6) Cultural literacy, 7) Digital Literacy, 8) Cross-disciplinary integration ability, 9) Practice ability, 10) Research ability, 11) Wellness , 12) Awareness of the rule of law, 13) knowledge structure.

The researchers then ran word frequency statistics on the summarized keywords. Replace the title of the policy text with the serial number indicated in the table 2. As shown in Table 3.

Table 3 Keywords Frequency Statistics

Key terms	Policy texts										Frequency
	I	II	III	IV	V	VI	VII	VIII	IX	X	
1.Cultivat emoral qualitués ability	√	√	√	√	√	√	√	√	√	√	10
2.Ideological and political literacy	√	√	√	√	√	√	√	√		√	9
3.Innovation ability	√	√	√	√			√	√		√	7
4.Didactic ability		√	√	√	√	√			√	√	7
5.Social service ability		√	√	√			√		√		5
6.Cultural literacy and confidence		√	√				√	√	√	√	6
7.Digital literacy	√	√					√	√	√	√	6
8.Cross-disciplinary integration ability		√					√	√	√	√	5
9.Practice ability	√		√	√			√	√			5
10.Research ability	√		√	√	√						4
11.Wellness		√									1
12.Awareness of the rule of law								√			1
13.knowledge structure									√		1

From Table 3, the word frequency statistics summarized indicate that there are 6 key terms related to the new liberal arts teacher competency requirements with a

frequency of 6 or more, in order of frequency, which are 1) Cultivat emoral qualitues ability, 2) ideological and political literacy, 3) innovation ability (Uphold fundamental principles and break new ground), 4) Didactic ability, 5) Cultural literacy, 6) Digital Literacy. Moreover, cultivat emoral qualitues ability, cultural literacy and confidence and ideological and political literacy are inherently tied to teachers' professional ethics and represent the quality requirements for educators to implement moral education. Therefore, in this study, they are categorized as art teachers' Moral education ability.

In addition, among the 6 terms of competence mentioned above, although the frequency of digital literacy is relatively low, they all appear in the four policy documents about the New Liberal Arts, which fully indicates that digital literacy is a heterogeneous requirement for the liberal arts teachers in the construction of the New Liberal Arts.

In summary, through an analysis of policy texts in Chinese higher education, three competence components for university art teachers under the New Liberal Arts framework have been identified: 1) Moral education ability, 2) Uphold fundamental principles and break new ground, 3) Digital literacy.

Table 4 Competence components of art teachers under the New Liberal Arts framework and their theoretical foundations

Theoretical foundations	Components of art teachers' competence
Literature-based (common basis)	1.Knowledge literacy
	2.Didactic ability
Policy Texts-based (heterogeneous components)	3.Digital literacy
	4.Uphold fundamental principles and break new ground
	5.Moral education ability

From table 4, in summary, synthesizing the results of the analyses of literature studies and policy research, the researcher summarized the components of competence of art teachers in the context of the new liberal arts into five areas: 1) Knowledge Literacy, 2) Didactic Ability, 3) Digital Literacy, 4) Uphold fundamental principles and break new ground and 5) Moral education ability.

1. Knowledge Literacy

Kozyr, A.V., et al. (2021) pointed out Art disciplines educator also includes consideration of the phenomenon of artistic and pedagogical erudition, which is based directly on the developed mechanism of mental actions and operations.

Shulman, L.S. (1987) categorized the knowledge that teachers should possess into seven categories. These categories include:

(1) Content Knowledge: refers to teachers' understanding and mastery of the subject matter they teach.

(2) Pedagogical Knowledge: refers to the general principles and strategies beyond specific subjects for classroom management and organization.

(3) Curriculum Knowledge: refers to the mastery of textbooks and teaching plans as "professional tools" for teaching.

(4) Pedagogical Content Knowledge: refers to the understanding of how to organize, express, and adjust specific topics, problems, or arguments to adapt to the different interests and abilities of learners, integrating subject matter content with educational principles.

(5) Knowledge of Learners and Their Characteristics: refers to knowledge about students, including their interests, abilities, learning styles, etc.

(6) Knowledge of Educational Contexts: includes everything from the situation of the class or classroom, the management and funding allocation of the school district, to the characteristics of the community and culture.

(7) Knowledge of Educational Aims, Purposes, Values and Their Philosophical and Historical Grounds: refers to the understanding of educational goals, purposes, and values, as well as the philosophical and historical backgrounds of these goals.

Berliner, D.C. (1986) in his research, proposed this classification of expertise dividing teachers' knowledge into the following four categories:

(1) Content Knowledge: refers to a deep understanding and mastery of the specific content taught in a subject area.

(2) Pedagogical Content Knowledge: involves the integration of subject matter content with teaching methods, understanding how to effectively impart knowledge in a particular subject.

(3) General Pedagogical Knowledge: encompasses general teaching principles and strategies that transcend specific subjects, including classroom management, student assessment, etc.

(4) Knowledge of Learners and Their Characteristics: refers to a profound understanding of students' learning needs, interests, abilities, learning styles, etc., in order to better meet their learning demands.

Elbaz, F. (1981) in his research, divided teacher knowledge into five distinct categories.

(1) Self-knowledge: This refers to teachers' awareness of their own beliefs, values, emotions, preferences, and personal teaching styles. This knowledge influences how teachers interact with students and how they design and adapt their teaching methods.

(2) Subject Matter Knowledge: It encompasses teachers' understanding and mastery of the content they teach. This includes the basic concepts, principles, theoretical frameworks of the subject, and how it relates to other disciplines.

(3) Curriculum Knowledge: This knowledge involves teachers' understanding of course design, teaching objectives, content, and methods. It covers selecting and organizing content that suits students' needs and learning levels, as well as developing effective lesson plans.

(4) Pedagogical Knowledge: This involves teachers' understanding of teaching methods, strategies, techniques, and assessing student learning. It includes knowledge of different learning styles, needs, and interests of students, and how to adapt teaching strategies to meet their needs.

(5) Contextual Knowledge: This refers to teachers' understanding of the teaching environment, school culture, community background, and students' home backgrounds. This knowledge helps teachers comprehend the social and cultural contexts in which students operate and how these factors influence their learning and development.

Liakopoulou, M. (2011) pointed out there are knowledge fields that constitute a necessary prerequisite for every teacher, or at least for a large part of them, and which form the basic part of “professional knowledge”, these include:

(1) Subject knowledge: Teaching a particular subject requires familiarization with scientific knowledge. For such a specific comprehension of scientific knowledge as a way of teaching, familiarization with the science and its dimensions is necessary. A classification of the dimensions of scientific knowledge is the following: science content (opinions, axioms, facts, etc.), relations, organization and structure of the contents of a scientific subject, the research methodology on the scientific field, the procedures and ways that contribute to the generalization of the “truth”, explored in every scientific field and now being acknowledged (syntactic knowledge).

(2) Knowledge of learners: this comprises knowledge on the biological, social, psychological and cognitive development of students, on issues related to group dynamics and interaction between students as well as teachers and students, students’ behavioral problems, learning motivation, adjustment issues, learning difficulties, etc.

(3) Teaching methodology: a way to define the necessary qualifications of a teacher is to give a detailed description of the teaching methodology. A schematic presentation of the specific structural elements of instruction follows: lesson planning, teaching performance, and evaluation of teaching.

(4) Curriculum knowledge: the school curriculum is a tool, which, in a way, determines the didactic choices of a teacher. Teachers should, therefore, know the curriculum, textbooks, the rules and laws of the education system and, as a whole, the state’s role in education.

(5) General pedagogical knowledge: this field relates to the organization of the classroom, to motivating and retaining students attention, pooling resources, learning theories and pedagogical theories. This knowledge is absolutely essential for lesson planning, as it guides the teacher’s didactic choices.

(6) Knowledge of contexts: a teacher is called upon to evaluate the contexts in which he teaches and act accordingly, as his actions are defined by surrounding circumstances.

(7) Knowledge of “self”: a basic qualification of teachers, related to their views on their role, responsibilities, training and qualifications, rights and professional development, working conditions, values, and philosophy, etc. and is

mainly connected to their professional development through reflection, to learning through their teaching experience, in relation to their working environment.

Cochran-Smith, M. (1984) pointed out that the process of knowledge construction is not an individual act, but a situational event that creates, reproduces and shapes meaning in historical, social, political, linguistic and cultural contexts.

Ye Xiaoni (2024) pointed out Knowledge is the first-level indicator of teacher competence, including subject expertise, teaching technology knowledge and general knowledge.

Declaration on the Construction of New Liberal Arts (2020): Promoting integration and development is an inevitable choice for the construction of new liberal arts. It is imperative to further break down the barriers of disciplines and specialties, promote the deep integration between liberal arts majors, cross-fertilization of liberal arts with science, technology, agriculture and medicine, and incorporate modern information technology to empower liberal arts education and achieve self-renewal, so as to build a new liberal arts discipline.

In summary, knowledge literacy refers art teachers in university must have the multidisciplinary and cross-fertilized knowledge structure and knowledge crystals in order to apply to the requirements of the construction of new liberal arts. It includes professional knowledge of a subject, interdisciplinary knowledge literacy, basic theoretical knowledge of pedagogy, knowledge of the humanities, and creative practice knowledge. The organic combination of these knowledge constitutes the unique knowledge structure and ability system of art teachers in colleges and universities, reflecting the teachers' knowledge reserves in their professional fields, and providing a solid support for their teaching, scientific research and social service activities.

2. Didactic Ability

Gu Mingyuan (1998) defined that Didactic ability is a behavioral characteristic that teachers display in order to achieve teaching goals and successfully engage in teaching activities. It consists of general ability and special ability. General ability refers to the cognitive ability demonstrated in teaching activities, while special ability refers to the specialized ability of teachers to engage in specific teaching

activities. Such ability has a significant impact on the effectiveness of teaching and the development of students.

Tigelaar, D. E. H., et al. (2004) defined that Didactic ability can be defined as the capacity to ensure effective performance in a range of specific teaching situations. It is a personal attribute that is made up of a combination of knowledge, skills, and attitudes. This capacity is displayed in teachers' ability to translate generic teaching principles into practice, to apply theory to practical situations, and to take account of students' needs and wishes. It is the result of a continuous process of professional development and learning.

Nijveldt, M. (2009) defined "teaching ability" as the comprehensive ability of teachers to use a set of professional knowledge, skills and attitudes to fully meet teaching requirements.

Zhang Shanchao & Li Bing (2024) believed that teaching ability refers to the comprehensive characteristics of teachers using their attitudes, motivational factors, professional knowledge, professional skills, etc. to achieve classroom teaching goals during classroom teaching.

Simonović, N. (2021) emphasized the importance of didactic ability. The didactic group of ability implies 1) the possession of the ability of didactic content design with the application of various didactic methods, techniques, forms of work; 2) available teaching resources and aids for the efficiency and effectiveness of the teaching process; 3) as well as the development of new and creative didactic materials for teaching.

Shen Jiliang & Wang Kairong (2000) pointed out that didactic ability is a special ability (professional ability) based on cognitive ability and manifested in subject-specific teaching activities. Didactic ability includes:

(1) Teaching monitoring ability refers to the ability of a teacher to ensure the success of teaching and achieve the expected teaching goals, and to take the teaching activity itself as an object of awareness during the whole process of teaching, and to plan, check, evaluate, feedback, control and regulate it proactively and constantly.

(2) Teaching cognitive ability mainly refers to the teacher's ability to analyze and judge the teaching objectives, teaching tasks, learners' characteristics,

teaching methods and strategies as well as teaching situations, and teaching cognitive ability is the foundation.

(3) Teaching operational ability mainly refers to the ability of teachers to solve teaching problems in the process of realizing teaching objectives.

Tulloch, B.R. (1986) identified the teacher's didactic ability as consisting mainly of the ability to transmit knowledge of the curriculum, to construct theoretical models and to take into account the needs of the students.

The content of digital education is currently under scrutiny in all developed countries. Such concepts as “digital pedagogy”, “digital literacy”, “digital competence”, “digital culture”, and “digitalization of education” are widely discussed in the professional environment. Digital literacy includes 1) the ability to read and interpret digital media, 2) reproduce data and images using electronic devices, 3) and evaluate and apply new knowledge obtained from the electronic environment. The teacher’s digital literacy is a system of basic knowledge, skills and positions in the field of everyday use of digital technologies.

In summary, didactic ability refers art teachers in university have the ability to use advanced teaching concepts, guide students in their learning activities, complete teaching activities scientifically and effectively, and achieve teaching goals in the context of the new liberal arts, as well as the ability of teachers to manage the entire teaching process. It covers a variety of psychological and behavioral characteristics shown by art teachers in teaching activities, including teaching design ability, teaching implementation ability, teaching regulation ability and teaching evaluation ability.

3. Digital Literacy

Ismail RAOB.et al. (2012) emphasized the 21st century learner and learning environments have changed with the advent of technology.

Hsu, S. (2010) pointed out technology changes what is usually viewed as effective schooling. Educators now must focus on safety, security, and ethical behaviors as it pertains to technology.

Sudip Mandal (2018) emphasized the 21st century teacher needs to know how to provide technologically supported learning opportunities for students and know how technology can support student learning.

The Central Committee for Network Security and Informatization (2021) pointed out that digital literacy is a collection of qualities and competencies such as digital acquisition, production, use, evaluation, interaction, sharing, innovation, safety and security, ethics and morality that citizens in a digital society should possess in their learning and working lives, including the following elements:

(1) Digital Awareness includes: internalized digital sensitivity, authenticity and value of numbers, motivation to actively discover and make use of real and accurate numbers, sharing of real, scientific and valid data in collaborative learning and work, and active maintenance of data security.

(2) Computational thinking includes: when analyzing and solving problems, taking the initiative to abstract problems, decompose problems, construct models and algorithms for solving problems, making good use of iteration and optimization, and forming paradigms for efficiently solving similar problems.

(3) Digital Learning and Innovation includes: actively utilizing rich digital resources, a wide range of digital tools and ubiquitous digital platforms for exploration and innovation in learning and life.

(4) Digital social responsibility includes: forming correct values, morals, and the rule of law, and following digital ethical norms.

Martin, A. (2023) proposed the awareness's, skills, understandings, and reflective-evaluative approaches that are necessary for an individual to operate comfortably in information-rich and ICT-supported environments. For the individual, digital literacy consists of 1) awareness of the ICT and information environment; 2) confidence in using generic ICT and information tools; 3) evaluation of information-handling operations and products; 4) reflection on one's own eLiteracy development; 5) adaptability and willingness to meet eLiteracy challenges.

Gilster, P. (1997) identified critical thinking rather than technical competence as the core skill of digital literacy, and emphasizes the critical evaluation of what is found on the Web, rather than the technical skills required to access it. He also emphasized the relevant usage of skills "in your life", that digital literacy is more than skills or competences.

Martin A, & Grudziecki J. (2006) stated that Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and

facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.

(1) Digital ability, encompasses skill levels from basic visual recognition and manual skills to more critical, evaluative and conceptual approaches, and also includes attitudes and awarenesses.

(2) The central and crucial level is that of digital usage: the application of digital competence within specific professional or domain contexts. Digital usages are therefore fully embedded within the activity of the professional, discipline or domain community.

(3) The ultimate stage is that of digital transformation, and is achieved when the digital usages which have been developed enable innovation and creativity, and stimulate significant change within the professional or knowledge domain. This change could happen at the individual level, or at that of the group or organization.

Paul, G. (1997) defined digital literacy as the ability to solve problems using digital technology, including the ability to find, evaluate, use, create and communicate information.

Zhao Xiaofeng & Sun Xianghui (2014) believed that digital literacy refers to the comprehensive scientific skills and cultural literacy that can quickly and effectively discover and acquire information, evaluate information, integrate information and communicate information in a digital environment using certain information technology means and methods.

Li Xinying (2025) believed that the connotation of digital literacy of college teachers has some special requirements and needs compared to the digital literacy of ordinary people. It refers to the ability and awareness of teachers to use digital technology to effectively carry out teaching, research and academic activities, including information acquisition and evaluation capabilities, digital tools and technology application capabilities, data processing and analysis capabilities, and digital security and moral awareness

The Ministry of Education (2022) promulgated "Digital Literacy of Teachers". Teacher digital literacy refers to the awareness, ability and responsibility of

teachers to appropriately use digital technology to acquire, process, use, manage and evaluate digital information and resources, discover, analyze and solve educational and teaching problems, and optimize, innovate and transform educational and teaching activities. It includes five dimensions: digital awareness, digital technology knowledge and skills, digital application, digital social responsibility, and professional development.

In summary, Digital Literacy refers art teachers in university have the ability to use digital tools and platforms to implement art teaching, scientific research and art creation activities, and to have the ability to reform and innovate the development of higher art education empowered by artificial intelligence. It includes digital awareness, digital technology knowledge and skills, digital application and digital social responsibility.

4. Uphold fundamental principles and Break new ground

General Secretary Xi Jinping (2016) presided over a symposium on philosophical and social sciences in his emphasized in his speech that "whether our philosophical and social sciences have Chinese characteristics depends, in the final analysis, on whether they have subjectivity and originality.

The Declaration on the construction of New Liberal Arts (2020) stated that "our consensus: the new era and new mission require liberal arts education to accelerate innovation and development." But innovation must "adhere to the road of development of liberal arts education with Chinese characteristics". Insist on Uphold fundamental principles and break new ground. Innovation in inheritance is the inevitable requirement for the innovative development of liberal arts education. The construction of the new liberal arts should not only be based on the source, but also be good at seeking changes, based on the two big pictures, constantly draw strength from the excellent traditional Chinese culture, take the initiative to adapt to and leverage modern information technology means, to achieve high-quality and high-level development of liberal arts education.

Yang Jian, Song Xiaohong, & Gong Shi (2023) pointed out that in order to do a good job of teaching, first of all, we must find out what the "right way" of teaching is, and find out how to practice the "right way" of teaching. The "right way" of teaching covers its purpose and pursuit, structure and function, design and

construction, theory and practice (process, approach and method), evaluation and innovation, and other laws and rules. Innovation is an activity based on the law of education and teaching development, which changes the teaching activities, renews and develops them so as to obtain material or spiritual results that can meet the needs of talent cultivation, including the innovation of teaching theory, the innovation of teaching practice and the innovation of teaching content.

Liu Tiantian (2024) explained that keeping the right and innovating means not "abandoning the past", but to achieve the goal of making up for shortcomings and promoting advantages through exploring new forms and new content of development. Keeping the right means keeping the ideological and theoretical nature of ideological and political courses, and providing theoretical guidance for promoting the development of ideological and political theory courses in colleges and universities; innovation means improving the affinity and pertinence of ideological and political courses, and providing a practical approach for promoting the development of ideological and political theory courses in colleges and universities.

Liu Feiliu, & Liu Youzhong (2024) Keeping the right and innovating means respecting and abiding by the laws of the development of things, and in the process of innovating existing things, transforming existing things, while combining regularity with purposefulness to form new practical results and new cognitive results.

Robert J. Sternberg (1998) explored in detail how the most distinguished teachers of the ancient world taught and draws lessons from them about transmitting wisdom. He suggests that what these ancient teachers did to innovate the content of their teaching has important lessons for our teachers today. He argues that modern teachers should draw on the wisdom of ancient teachers to combine traditional knowledge with modern teaching methods to create a more engaging classroom environment. Such innovations not only stimulate students' interest in learning, but also develop their critical thinking and problem-solving skills.

In summary, Uphold fundamental principles and Break new ground refers to in the context of the new liberal arts, art teachers in university have the ability to adhere to the dialectical unity of inheritance and development, regularity and purpose when teaching and educating people. On the one hand, they can adhere to the truth, including adhering to the original mission of "educating people for the Party and

educating talents for the country", following the objective laws of art education, and inheriting the fine traditions of art education. On the other hand, they can carry forward the spirit of innovation, expand the instrumental nature of art disciplines, and give new vitality to art disciplines through the social demand-oriented and practice-oriented cultivation of talents.

5. Morality education ability

The individuals become social and cultural being in social life. (Mandal, Sudip, 2018) Liberal arts mainly include social and humanities knowledge, which aims to explain the various types of human behaviors and manners, so as to achieve the understanding of human behavior (Patton L, 2015). Unlike the natural sciences, the humanities and social sciences are more helpful in spreading new and modern ideas and concepts, and have the functions of ideological core and political leadership (Liu Kang, 2021), which leads to its cultivation of human resources, paying more attention to shaping the students' values of life, sense of social responsibility and humanism (Zhang Tianshu, 2022).

General Secretary Xi Jinping emphasized that "we should integrate moral education into all aspects of ideological and moral education, cultural and intellectual education, and social and practical education, and run through all areas of basic, vocational and higher education" (2016). "We should internalize the cultivation of moral integrity into all fields, aspects and links of university construction and management, so as to make the cultivation of human beings the core and the establishment of moral integrity the fundamental" (2018), and "integrate the cultivation and practice of socialist core values into the whole process of teaching and educating people" (2014).

Li Guoyi (2019) explained that Moral education ability of teachers refers to the comprehensive quality of teachers who are competent in moral education and effectively achieve moral education goals under a certain cultural background. It is based on the professional ethics of individual teachers, and guides and influences students' ideological and moral qualities through effective methods to improve their ideological and political qualities and achieve moral education goals.

Chi Peng (2020) defined that Moral education ability refers to the ability of educators to effectively grasp, guide and control all factors that may affect students'

ideology and morality through teaching activities using their personal moral education knowledge, experience and personal prestige, so that students' moral education can develop smoothly towards the goal of moral education.

Meng Pi (2020) explained that establish morality is to adhere to moral education, emphasizing that teachers should learn to use encouragement, guidance and influence to educate students in the process of education to improve their moral cultivation; to cultivate people is to adhere to people-oriented and teach students in accordance with their aptitude, so as to shape excellent talents.

Feng Jianjun (2022) suggested several aspects that need to be emphasized in current moral education:

- (1) Constructing communist ideal beliefs.
- (2) Firmly establish socialist core values.
- (3) Thickly plant traditional Chinese virtues, carry out education on outstanding traditional culture, cultural self-confidence.
- (4) Carry forward the national spirit and the spirit of the times and (5) To establish a global concept and ecological awareness.

Althof, W., & Berkowitz, M. W. (2006) pointed out moral education is the attempt to promote the development of children's and adolescents' moral cognitive structures (moral reasoning stages) in school settings.

In summary, Moral education ability refers art teachers in university have noble teacher ethics and character, have the ability to educate people with morality and cultivate talents with moral character, so that they can better assume their responsibilities as teachers and guides. Moral education ability emphasizes the ability of art teachers to insist on moral education as the first priority, stresses the ability of art teachers to adhere to the "people-centred" principle, to take students as the centre of teaching and learning, to cultivate students' knowledge and practical abilities, and to shape and develop artistic talents that meet the needs of the times. Moral education ability involves the charisma of the teacher and the emotional dynamics of teaching.

In the context of the new liberal arts, college art teachers should consciously assume a noble sense of professional mission and conscious sense of responsibility, standardize their words and deeds, educate and infect students with

their own charisma and learning style, and teach with virtue. (Yin Zhisheng, & Liu Lili,2023)

Concept and Theory of Teacher Development

1. Adult Learning Theory

Eduard C. Lindeman (1926) stated: "The approach to adult education will be via the route of situations, not subjects. In adult education the curriculum is built around the student's needs and interests. Adult education begins at this point. The resource of highest value in adult education is the learner's experience. If education is life, then life is also education. Too much of learning consists of various substitutions of someone else's experience and knowledge. Experience is the adult learner's living textbook."

Merriam, S. B. (2018) stated: "The mid-1960s saw the commencement of research in the field of adult education, with adult educators themselves taking the lead in studying adult learners. This research yielded numerous models, theories and frameworks that sought to delineate the distinguishing characteristics of adult learners in contrast to those of children. Three fundamental adult learning theories have been identified: andragogy, self-directed learning and transformative learning."

1.1 Andragogy

Andragogy is a European concept imported to the U.S. by Malcolm Knowles in the late 1960s. He introduced it as "a new label and a new technology" distinguishing adult learning from children's learning or pedagogy.

Knowles, M.S. (1980, 1984) proposed 5 assumptions about the characteristics of adult learners:

(1) **Self-Concept:** As a person matures his or her self-concept moves from that of a dependent personality toward one of a self-directing human being.

(2) **Adult Learner Experience:** An adult accumulates a growing reservoir of experience, which is a rich resource for learning.

(3) **Readiness to Learn:** The readiness of an adult to learn is closely related to the developmental tasks of his or her social role.

(4) **Orientation to Learning:** There is a change in time perspective as people mature—from future application of knowledge to immediacy of application.

Thus, an adult is more problem centered than subject centered in learning

(5) Motivation to Learn: Adults are mostly driven by internal motivation, rather than external motivators.

Knowles (1984) suggested 4 principles that are applied to adult learning:

(1) Adults need to be involved in the planning and evaluation of their instruction.

(2) Experience (including mistakes) provides the basis for the learning activities.

(3) Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life.

(4) Adult learning is problem-centered rather than content-oriented.

Knowles, M.S. (1989) himself came to concur that andragogy is less a theory of adult learning than "a model of assumptions about learning or a conceptual framework that serves as a basis for an emergent theory"

Houle, C.O. (1996) pointed out that education is fundamentally the same wherever and whenever it occurs. Andragogy remains as the most learner-centered of all patterns of adult educational programming. The significant is that andragogy has alerted educators to the fact that they should involve learners in as many aspects of their education as possible and in the creation of a climate in which they can most fruitfully learn". Focusing on the teaching-learning situation seems to be the position taken by Cyril Houle.

1.2 Self-Directed Learning

Tough, A. (1967, 1971) provided the first comprehensive description of self-directed learning as a form of study. Tough studied and described the self-planned learning programs of sixty-six Canadians. The uncovering and documenting of this type of learning-learning that is widespread, that occurs as part of adults' everyday life, and that is systematic yet, does not depend on an instructor or a classroom-generated one of the major thrusts of research in the field of adult education. He believes that self-directed learning is self-learning conducted by learners in making plans and guiding learning activities.

Knowles, M.S. (1975) defined "self-directed learning" as: Individuals, with or without the assistance of others, can proactively diagnose their own learning

needs, establish learning goals, determine the human and material resources for learning, select and implement appropriate learning strategies, and evaluate learning results. The adult learning model is a self-directed learning, a proactive learning method. Teachers are no longer the center of teaching. The teacher's responsibility is to pay attention to the progress and development of learners, provide learning resources for learners, and work with learners to find the best learning method.

Knowles. M.S. (1984) called upon educators to employ a seven-steps process in order to implement and capitalize upon the assumptions of andragogy. These seven steps are a gradual process and a linear structure with a single starting point.

- (1) Creating a cooperative peer-to-peer learning climate.
- (2) Establishment of cooperative planning institutions, planning goals and objectives.
- (3) Learners self-diagnose their learning needs, mutually diagnosing learner needs and interests.
- (4) Helping learners to formulate learning objectives based on their needs and individual interests.
- (5) Design learning plan, designing sequential activities to achieve these objectives.
- (6) Implement learning activities, carrying out the design to meet objectives with selected methods, materials, and resources.
- (7) Evaluate and adjust, evaluating the quality of the learning experience for the learner that included reassessing needs for continued learning.

The mechanism process model proposed by Boyatzis R.E. (1999, 2002) contains five "discontinuity", including Ideal Self, Real Self, Mindfulness Through a Learning Agenda, Metamorphosis and Relationships. Li Changjun (2014) pointed out that from Boyatzis's model, we can see that the learner's re-understanding of himself, participation in activities, and encouragement from others can all be the starting point of self-directed learning. Self-direction is a cyclical process without a clear starting point and end point. Reliable interpersonal relationships play an important role at each stage. Self-directed learning is a non-linear process.

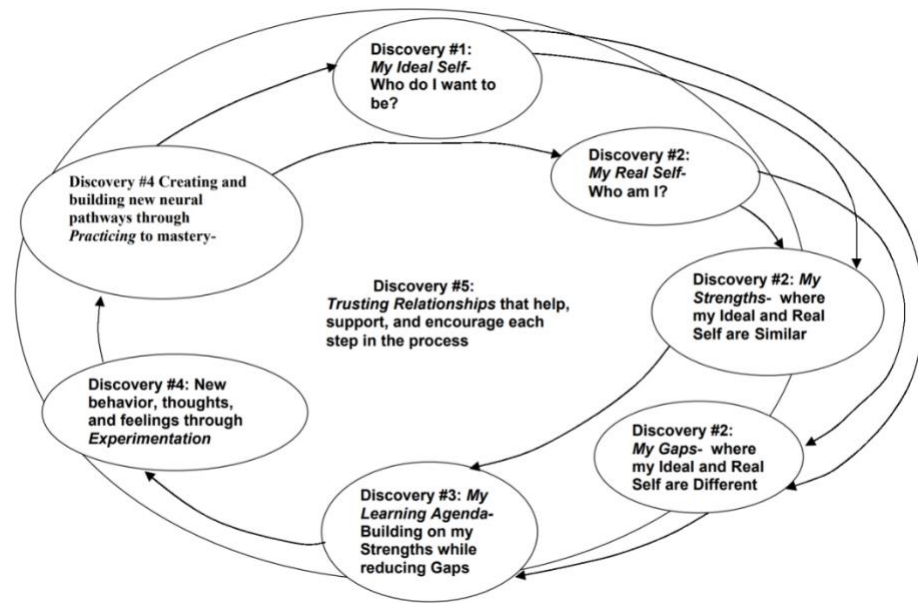


Figure 4 Boyatzis' Theory of Self-Directed Learning

In an attempt to expand the scope of self-directed learning, Garrison D. R. (1997) presented a comprehensive theoretical model. The proposed model integrates 3 dimensions to reflect a meaningful and worthwhile approach to self-directed learning:

(1) Self-management (contextual control), includes learners' control and transformation of situational conditions.

(2) Self-monitoring (cognitive responsibility), refers to the learner's ability to monitor their own cognitive and metacognitive processes.

(3) Motivational (entering and task), involves factors that influence people to join self-directed learning activities and factors that keep them engaged in self-directed learning.

The model provides a comprehensive framework for understanding self-directed learning, emphasizing the important role of social constructivism in the learning process. It reveals how learners construct knowledge through interaction and collaboration in a social environment and emphasizes the initiative and autonomy of learners in the learning process. Garrison's model has been widely used in the field of adult education. (Li Changjun, 2014)

Deng Yunlin (1994) summarized the definitions of self-directed learning by scholars into the following four categories: 1) Self-directed learning is a process. 2) Self-direction is a learning ability. 3) Self-direction is a sign of learning. 4) Self-

direction is a form of learning.

Merriam, S.B. (2001) summarized the goal of self-directed learning based on the literature. the goals of self-directed leaning vary: Self-directed learning should have as its goal the development of the learner's capacity to be self-directed. A second goal is the fostering of transformational learning. The third goal for self-directed learning is the promotion of emancipatory learning and social action.

Self-directed learning has a huge impact on the development of adult education. (Yao Yuanfeng,2008) High self-directed learners are aggressive, independent and have the patience to learn; they are responsible for their own learning; they are not afraid of challenges and obstacles; they have the ability to self-train; they are highly curious; they have a strong desire to learn; they can be self-affirming; they can use basic learning skills; they can use time to arrange learning; they can plan the entire work, enjoy learning and tend to be goal-oriented. (Guglielmino L.M, 1977) In adult education, no field has received such widespread attention and has such a large number of supporters as self-directed learning. Self-directed learning is a framework that is often confirmed in adult education. (Garrison, D.R., 1997)

1.3 Transformative Learning

Mezirow, J. (2018) pointed out the concept of transformative learning was introduced in the field of adult education in 1978 in an article 'Perspective Transformation', published in the American journal *Adult Education Quarterly*. A major emphasis of critics of transformation theory has been its de-emphasis of social action. Instead of focusing on the adult learner's characteristics as andragogy and to a large extent self-directed learning do, transformative learning focuses on the cognitive process of meaning making.

The first comprehensive presentation of transformative learning theory was Mezirow's (1991) *Transformative Dimensions of Adult Learning*. Mezirow, J. (1991) explained that transformative learning theory "does not derive from a systematic extension of an existing intellectual theory or tradition"; rather, it is an integration of his earlier research and concepts and theories from a wide array of disciplines. Transformative learning theory is based on constructivist assumptions, and the roots of the theory lie in humanism and critical social theory. Meaning is

constructed through experience and our perceptions of those experiences, and future experiences are seen through the lens of the perspectives developed from past experiences.

Taylor, E. W., & Snyder, M. J. (2012) explained that transformative learning theory is based on the notion that we interpret our experiences in our own way, and that how we see the world is a result of our perceptions of our experiences. Transformative learning is a process of examining, questioning, and revising those perceptions. Learning occurs when an alternative perspective calls into question a previously held, perhaps uncritically assimilated perspective.

Brookfield, S. is the major theorist with regard to a critical theory perspective on adult learning, Brookfield, S. (2001, 2005) has proposed a theory of adult learning that has “at its core an understanding of how adults learn to recognize the predominance of ideology in their everyday thoughts and actions and in the institutions of civil society. There are seven “learning tasks” embedded in a critical learning theory:

(1) Challenging ideology. This is “the basic tool for helping adults learn to penetrate the givens of everyday reality to reveal the inequity and oppression that lurk beneath”;

(2) Contesting hegemony. Hegemony is the notion that “people learn to accept as natural and in their best interest an unjust social order”;

(3) Unmasking power. “Part of becoming adult is learning to recognize the play of power in our lives and ways it is used and abused”;

(4) Overcoming alienation. “The removal of alienation allows for the possibility of freedom, for the unmanipulated exercise of one’s creative powers”;

(5) Learning liberation. Adults need to learn to liberate themselves, individually and collectively, from the dominant ideology;

(6) Reclaiming reason. “A major concern of critical theory is to reclaim reason as something to be applied in all spheres of life”;

(7) Practicing democracy. Adults must learn to live with the contradictions of democracy, “learning to accept that democracy is always a partially functioning ideal”.

Cranton's (1994; 1996; 2000) writings focus on how to create Mezirow's

ideal conditions in the classroom. She suggests instructors relinquish some of their authority or "position power" in the classroom. Using first names and having learning contracts are two ways to do this. Second, Cranton recommends recognizing learners' learning styles in order to help them critically question their assumptions.

Taylor's review (2000a) uncovers several ways to foster transformational learning in the classroom. First, "fostering group ownership and individual agency" promotes transformational learning. Taylor states that "placing teachers at the center of their own learning in a critically reflective and social group setting contributed to transformation" Second, studies revealed that teachers need to "capitalize on the interrelationship between critical reflection and affective learning" Taylor notes, "The significance of processing feelings increases the powered appreciation of critical reflection when fostering transformational learning". Finally, value-laden course content appeared to foster transformational learning in that discussions about controversial topics provoked critical reflection.

Transformational learning theory has expanded our understanding of adult learning by explicating the meaning-making process. It is not what we know but how we know that is important. Critical reflection on the theory in combination with thoughtful discussion is leading to a broader, more inclusive understanding of transformational learning. (Merriam, S. B. ,2001)

In summary, adult learning has been described consistently as a process that is different from children's learning since Knowles, M.S. (1975, 1980) made that distinction. In the 1970s and 1980s, adult learning was described as voluntary (individuals choose to become involved), self-directed, experiential, and collaborative. During that time, adult learning was seen to be a cognitive process that led to the acquisition of skills and knowledge. Instructional design and program planning models focused on setting objectives, finding appropriate learning strategies, and objective assessment of the learning. Knowles, M.S. (1980) advocated that the learner be involved in making instructional design decisions, but aside from that, the process did not deviate much from instructional design in any other setting. Brookfield, S. (2001) critiqued the automaton approach to meeting learner needs and discussed the political dimensions of self-directed learning (Brookfield, S.,1993). Attention returned to the social context of adult learning and to learning that goes

beyond cognitive processes. The evolution of transformative learning theory has paralleled and been strongly influenced the development of adult learning theory in general. We are now in the "second wave" of theory development in the field of transformative learning; that is, we are moving toward the integration of the various factions of the theory and into a more holistic perspective. (Taylor, E. W., & Snyder, M. J. ,2012)

2. Definition of Teacher Development

Teacher development has become a recognized area of research. As Freidson (1994) pointed out the reason why researchers need to be clear about the concept of teacher development is that reaching a common understanding when studying teacher development will help to avoid compromising structural validity, differences in the parameters of the research process and differences in identifying the process of teacher development.

Keiny, S. (1994) stated that a concept of teacher development involves teachers reflectively summarizing their own teaching practice and in turn constructing their own theories of teaching and learning, professional development can be seen as a process of professional growth.

Bell, B. & Gilbert, J. (1994) provided more clarity teacher development can be seen as teachers changing through their own learning. In the process of learning, teachers are developing their beliefs and ideas, developing their classroom practice, and attending to the self-perceptions associated with change. They identified and described 'three main types of development': personal development, professional development and social development. The process of teacher development can be seen as a process of personal, professional and social development, and one in which only when one aspect is developed can the others follow. Teacher development can be seen as having two aspects. One is the input of new theoretical ideas and new pedagogical suggestions. The second is the collaborative situation.

Evans, L. (2002) clearly defined his concept of teacher development; teacher development is the process of increasing teachers' professionalism and/or professionalism, a process that is ongoing or has already occurred and is completed, a process of subjective or objective development or both. Teacher development is the process of increasing teachers' professionalism and/or professionalism, a process that is

ongoing or has already taken place and is completed, a subjective or objective or both, and it can also be considered as a process of internalization in relation to the teacher, but also as a process of external application, which, although directed at the teacher, is also directed at external institutions. teachers, but also spends a large impact on external institutions.

Fuller, F.F. (1969) developed the Teacher Concerns Questionnaire (TCDQ) to study the changes in teachers' concerns in the course of their professional development. She proposed a four-stage model of the development of teachers' concerns in the process of becoming a teacher. This process consists of four stages: preteaching concerns, early concerns about survival, teaching situations concerns, and concerns about students.

Katz, L.G. (1972) divided teachers' development into four stages: survival, consolidation, renewal and maturity.

Fessler, R. (1985) proposed a holistic and dynamic teacher career cycle based on observations, interviews and typical surveys, combined with literature analyses of studies on adult development and stages of human life development. Fessler divided teacher development into eight stages: Pre-service, Induction, Competence building, Enthusiastic and Growing, Career Frustration, Stability and Stagnation. Fessler determined that professional development is influenced by both the individual teacher and his or her professional background. Individual contextual factors include family factors, positive key events, life crises, personal temperament or temperament, hobbies, etc. Professional contextual factors include school rules, type of management, public trust, social expectations, professional organizations and community organizations.

Steffy, B.E., (1989) divided teacher development into five stages: Preparatory career, Expert career, Withdrawal career, Renewal career, and Exit career. pursue professional growth. This is undoubtedly a transcendence of Fessler's theory. Therefore, Steffy's model of teacher career development describes the journey of teacher development more completely and realistically than other models.

Zhang Dongliang (2024) pointed out the development of college teachers is a multidimensional and dynamic process. Multidimensional means that teacher development involves the construction of teacher ethics, the improvement of

education and teaching, the deepening of scientific research capabilities, the optimization of talent cultivation, and the creation of social contributions, and also covers different levels of social, university, team and personal development. Dynamic means that the development of teachers is a continuous growth process with the continuous improvement of professionalism, the continuous expansion of development connotation, and the continuous awakening and transformation of consciousness.

In summary, the teacher development refers to the process of teachers' continuous development and improvement as professionals in terms of their professional concepts, professional knowledge, professional competence and professional attitudes or motivations, i.e., the process of going from a novice teacher to an expert teacher, which is characterized by diversity, autonomy and continuity.

The connotation of teachers' professional development mainly includes: (1) teachers' professional development firstly emphasizes that teachers are individuals with unlimited potential and continuous development; (2) teachers' professional development requires that teachers be regarded as "professionals"; (3) teachers' professional development requires that teachers become learners, researchers and collaborators; and (4) teachers' professional development requires teachers to be autonomous in their development.

3. Principle of Art Teacher Development

The 70:20:10 framework originates from empirical research undertaken by McCall Jr. et al. (1988)

McCall Jr. et al., (1988) comprising four separate studies of over 200 successful executives from six major corporations. Their research identified that 384 JOHNSON ET AL. significant executive management development was gained through challenging on the job experiences and relationships with senior managers and peers. Their data showed that challenging work experiences made up 70% of an executive's learning; 20% of their development occurred through relationships with other people and executive's bosses, and the remaining 10% of development occurred through formal training (McCall Jr. et al., 1988).

Mughal, Z. (2023) mentioned that the 70:20:10 training model emphasizes the integration of formal, experiential, and social learning, with 70% of learning

occurring through on-the-job experiences, 20% through social interactions, and 10% through formal training.

Taylor, D. H. (2017) stated that 70:20:10 model says that adult learning is a mixture of experiential, collaborative and formal learning , although not necessarily in those precise proportions.

Jennings, C. (2011) stated that the 70:20:10 training principles emphasize the importance of learning in the work environment, where most of an employee's learning is done through experience, practice, dialogue and reflection in the workplace. The 70:20:10 model and other research is showing that learning is more than formal experiences. A mixture of activities is needed to make it happen. It's not about the numbers, it's about the mix. Jennings, C. (2008) stated that the 70:20:10 approach is based on research, summarized by Jay Cross in his excellent book *Informal Learning: Rediscovering the Natural Pathways that Inspire Innovation and Performance*, that has shown the majority of learning (approximately 70 per cent) occurs in the workplace, through doing the job. A further 20 per cent of learning happens through on-the-job coaching, networking (knowing the right questions to ask the right person), and obtaining feedback from colleagues, managers and team members. The research shows that only 10 per cent of learning that transfers into improved performance occurs through participation in formal learning events. Even if a person retains information and gathers knowledge in a formal learning environment, it is unlikely to equate to improved performance without on-the-job practice. In fact, a 1996 study carried out by Dana Robinson found that, on average, less than 30 per cent of what people learn in formal training actually gets used back in the workplace.

Samantha J. Johnson et al. (2018) stated that reflecting the work of McCall and his colleagues, the 70:20:10 framework identifies three integral types of learning: experiential, social and formal. Experiential learning is described as occurring through challenging work-based assignments and makes up 70% of development; social learning takes the form of peer support, managerial support, mentoring and feedback and makes up 20% of development; and formal learning takes place through structured training programs and makes up 10% of development. Reflecting that learning must be tightly coupled with work to enable capability development and learning transfer. HRD practitioners are encouraged to develop complex training

programs that combine formal training with on the job training (experiential learning) and opportunities for peer and supervisor support (social learning)

Lombardo, M.M., & Eichinger, R.W. (1996) stated that the personnel development model according to the 70:20:10 framework is to develop personnel to develop their own potential, as follows:

(1) Learning and Development through Experience: 70 percent is the ratio of activities that will help develop oneself from experience of learning and development through daily work tasks. Working or being assigned challenging work and action

(2) Learning and Development through Others: 20 percent is the ratio of activities that will help develop oneself from research of learning and development through teaching. Working with the network and learning from working with others.

(3) Learning and Development through Program 10 percent is the ratio of activities that will help develop oneself from learning (Education) of education, learning and development through studying in educational institutions. official or through courses, training, and programs.

It is a concept that has been accepted as being truly effective in creating and developing personnel in the organization to truly learn. Rabin (2013) proposed the 70-20-10 Leadership Development Principles, a concept developed by the Center for Creative Leadership that divides leadership development principles into 10% formal and 90% informal. The informal suggests 70% learning from experience and putting it into practice in the real world, and 20 % learning from learning. This is learning that is encouraged and supported by others, such as receiving mentoring from your own boss. The other 10% of formal leadership development takes place in the classroom, distance learning through e-learning or instructor learning, details are as follows:

(1) 70% Learning Model is a learning model that occurs from experience.

70% of learning comes from experience and practice. This includes experience of actual work tasks and programs, as well as lessons learned through trial and error, a form of learning that helps employees to develop their skills and knowledge on the job. Working through seeing or touching real things in real work areas. or operations that are actually in the field Makes students quickly gain

awareness Effective perception leads to effective learning as well. This is because learners will use the events or stories they have learned to remember. and displaying that behavior It is like a guideline or bridge between practice and concepts, principles, or theories that people already have or have received. This causes awareness or accumulated experience to increase, leading to learning, imitation, and acting according to the behavior that was followed from the past, thus changing according to the new experiences received, leading to Creating and creating new behaviors or new competencies of individuals that affect the work assigned to them more efficiently. Competency refers to behaviors that require competencies. Capability or potential, or some textbooks can use the word characteristic or necessary dimensions that a person should have in work. The personnel development tools used with this learning approach will focus on tools that are not classroom training.

(2) 20% Learning Model is a learning model that occurs from others

20% learning is gained through interaction and collaboration with others. This includes interacting and collaborating with colleagues, leaders, and other experts, as well as solving problems and sharing experiences through participation in team programs and learning groups. This type of learning is a form of informal training that helps employees expand their perspectives and enrich their knowledge. Learning from others, that is, what we usually call Coaching or Mentoring (mentoring), etc., to find one or more behavioral benchmarks within the company, to communicate and imitate, and to analyze the reasons for their success, this is to stand in the perspective of the trainee to think about the problem. From the company's point of view, how can frontline managers (or supervisors) coach their subordinates to help them achieve performance improvement and competence development, and how can the HR department provide these coaches with appropriate coaching skills and resources to support them. The development tools used will focus on personnel development tools that are not classroom training tools or Non-Classroom.

(3) 10% Learning Model is a learning model that focuses on training.

10 % of learning is gained through formal training and educational activities. classroom combined with learning that focuses on tools that are not training in the classroom, whether through e-Learning media and various documents, by learning through programs or courses that are prepared. already This is another form

of development that is important and necessary and the organization cannot cancel this form of learning in order to create integrated learning and result in learners learning. This type of learning provides systematic knowledge and skills training to help employees gain professional knowledge and competence.

Prarasri, A., Chanawongse, A., & Tesaputa, K. (2018) stated that the research findings reveal the program development comprises 70:20:10 ratio of learning leadership development-70 percent on the job experience and off the job experience, 20 percent professional learning community (PLC) process and personal feedback, and 10 percent training.

Joshi, M. (2018) mentioned that an experimental study of the 70:20:10 model shows that career development comes primarily from practice, not just formal education and training. This accounts for 70% of their learning. 20% of their learning comes from interaction with others and observation of task performance in the workplace. Only 10% of what they learn is through participation in formal professional courses and various training programs. The focus of this model is on:

(1) Hands-on experience, interaction, formal education and training. Hands-on experience is associated with practical skills, stretch assignments, secondments and job exchanges, tasks that provide new experiences, and challenges at work.

(2) Interaction: in the course of their work, trainees are required to interact with others (coworkers, supervisors, managers, etc.). Trainees can learn from a variety of activities such as social learning, collaborative learning, coaching and mentoring, access to experts, debriefing and assessment.

(3) Formal Education and Training: It is envisaged that the remaining 10% of learning is the result of participation in formal courses and training programs. This 10% of learning takes place through: formal traditional courses, structured courses, online courses, training workshops, worker training programs, manager and supervisor training programs.

In summary, from studying the teacher competence development and transformation models from various academics, the researcher can conclude that 70:20:10 learning principle emphasizes the integration of formal, experiential, and social learning. There are 3 principles used to develop competence of art teachers: 1)

70% learning through experience, 2) 20% learning through others, and 3) 10% learning through courses.

4. Methods of Art Teacher Development

Loucks-Horsley, S. (1987) pointed out that merely sponsor workshops for teachers far underachieves the potential. There are an enormous number of alternatives to traditional in service training, many of them capable of benefiting both individuals and their schools. The challenge is to select approaches that mesh with individual, school, and district goals and also build on each other in meaningful ways. profile a dozen different approaches that can be used to carry out staff development activities a variety of organizing mechanisms and strategies for working with teachers. The approaches researchers include are:

(1) Teacher as researcher. Engaging teachers in research is a unique approach to staff development. Teachers becoming involved in meaningful ways in research, Researchers have learned that by working closely with teachers to not only conduct research, but also to define the research questions, the gap between research and factice is significantly narrowed. Staff developers have learned that teachers engaged in identifying and answering their most pressing questions not only find important solutions but are also energized by the challenge.

(2) Implementing innovative practices. Implementing innovative practices is an exciting way for teachers to gain new knowledge and skills, while their students benefit from new materials, strategies, and environments in which to learn. When researchers use the word innovative, they mean something that is new to the individual who is going to use it. When researchers use the word practice, they are considering any instructional, curricular, or management approach that can be defined by a set of behaviors.

(3) Clinical supervision. Clinical supervision offers teachers an opportunity to be such partners in the process of instructional supervision. Teacher and supervisor form a collaborative partnership, and together they engage in a process of supervision that focuses on analysis of the teacher's instructional skills as applied in the classroom. Maintenance and improvement of these skills is the goal of the process.

(4) Peer coaching. Peer partnering, pairs teachers for long-term training

programs such as Cooperative Learning and Hunter's ITIP (Instructional Theory into Practice). The pairs attend training together with the understanding that they'll be working together to apply their new learnings, with the result of producing more change in individuals, breaking down barriers, and promoting experimentation.

(5) Advising teachers. Advising teachers are those lead teachers, staff development associates, or specialists who work with teachers in schools on a continual basis, helping them refine techniques, build new curricula, or work out the implications of new research and development in the classroom.

(6) Mentoring beginning teachers. A mentor, by common definition, is an experienced adult who befriends and guides a less experienced adult. In doing so, mentors can serve many roles: teacher, coach, role model, developer of talent, sponsor, protector, opener of doors. Ideally, the term mentor is reserved for the person who serves in many of these roles.

(7) Teachers' centers. Teachers' centers are professional development structures operating within a school or district, or between collaborating organizations such as schools, colleges, teachers' associations, and businesses.

(8) Teacher institutes. Teacher institutes are intensive learning experiences that typically serve the purposes of substantive content and professional renewal. They may present new ways of thinking about school subjects or alternate methods of engaging students in learning. Whatever the emphasis, it is the intensity of study that most characterizes the institute as a professional development option.

(9) Networks. A network is a professional community that is organized around a common theme or purpose, characterized by information exchange. Members demonstrate spontaneity, flexibility, and informality in their contacts with other network members. An atmosphere of openness and sharing helps members to see each other as fellow problem solvers from whom they are willing to ask for help.

(10) Partnerships. Partnerships for professional development are based on the assumption that the quality and effectiveness of our educational system is the responsibility of the entire community, not just the schools. School administrators, teachers, and university professors are discovering an identity as members of a shared profession and are building a shared vision within an entire community about what constitutes educational excellence. Partnerships, to be effective, must truly be a two-

way exchange of resources and knowledge.

(11) Training of trainers. The training-of-trainers approach has been used with a high degree of success in schools, human service agencies, and business. It presents an efficient strategy for renewing numerous people on the job and offers a new educational role (trainer of adults) to professionals who have considerable knowledge to share with their colleagues. The most cost-effective way to improve staff skills is to invest in local trainers who can work closely with the staff.

(12) Individually guided. In individually guided professional development, teachers: assess their own strengths and weaknesses, based upon formal or informal measures of their performance; identify their own areas for improvement and/or development; plan their own strategies for achieving their professional development or improvement goals; and continuously assess their own growth and performance relative to their professional development goals.

Spark & Drago (1989) mentioned methods for teacher development as professional development consisting of 7 forms as follows:

(1) Training Model is a model that everyone has experience with. This training It could be a presentation and discussion of the work, workshop demonstration seminars, role plays, simulations or micro-level teaching, etc.

(2) Observation/Assessment Model may be observing other people or other people observing ourselves. May be individually or in groups to get feedback.

(3) Involvement in a Development Improvement Process Model. Model of involvement in the development or improvement process because of the development or improvement of any matter. It requires new knowledge and new skills that will make those who participate. There must be additional education, knowledge and skill development. There are opportunities to work together as a group and exchange ideas. as well as joint decision-making and the results of that participation It will create a feeling of participation and ownership, and committing to implementation and achieving results which will be beneficial to the development or improvement in that matter as well.

(4) Study Groups Model in cases where the school wants to find a the solution to the main problem together from everyone, every party. If the main problem can be broken down into different points. It will be divided into groups,

maybe 4-6 people per group, to study and analyze the issues in that group. At the end, when the results of each group's analysis are presented and shared, it creates an exchange of opinions and information. It creates learning and creates a learning community. which is considered another form of professional development.

(5) Inquiry/Action Research Model is an attempt to solve problems or find answers to questions that arise in work. This may be done at the individual, group or school level. and can be done in many ways, but generally the steps are as follows: 1) define or select a problem or question of interest 2) collect, organize, and interpret information related to that problem 3) study related literature and research 4) Determine options for action. 5) Take action and summarize in documents.

(6) Individually Guided Activities Model where each person determines their own professional development goals. Then choose activities to practice that you believe will help you achieve success. It is a form that has a preliminary agreement that Individuals are best able to judge their own learning needs. Able to determine the direction and take the initiative to learn on your own. and become more self-motivated by having the opportunity to initiate and plan learning activities on their own.

(7) Mentoring Model: It is popular to pair people with experience and success with people who are new to work or have less experience by discussing the aims of professional development. Exchanging ideas and strategies for effective practice Reflecting on methods currently in use observation of work and using techniques for improvement

McBeath, C. (1997) has suggested methods or elements for personnel development as follows.

(1) Work experience planning. It is a new assignment. To have the opportunity to learn new things. It may be work within or outside the organization, it may be part-time or full-time.

(2) Training is to increase knowledge and skills in current work. or to prepare for new work in the future and to make technical knowledge more modern.

(3) Continuing education to have a higher qualification. or to develop various skills or may learn on their own through other methods and reading professional journals.

(4) Suggestions, mentoring, and guidance.

Carette B, Anseel F, & Lievens F (2013) stated that to prevent the potential threats of career plateauing for mid-career employees, it has been suggested to give them challenging assignments. Empirical findings demonstrating that challenging job assignments generally have positive effects on job performance and career development. But drawing on work experience theory and in line with contemporary career theories, they argue that the relationship between challenging assignments and in-role job performance may depend on when people encounter them in their career. For early-career employees, a positive relationship emerged between having challenging assignments and peer-rated in-role job performance. For mid-career employees, the relationship exhibited an inverted U-shaped curve, such that challenging assignments have a positive influence on in-role job performance up to some point and then begin to exhibit diminishing returns. Their findings suggest that challenging assignments should be tailored to the experiential background of the employee.

Shulman, L. S. (1986) proposed the concept of "Pedagogical Content Knowledge" (PCK), emphasizing the importance of cultivating teachers' subject-specific pedagogical knowledge in teacher training. He believed that teacher training methods should focus on helping teachers transform subject knowledge into teaching knowledge that is suitable for students' understanding and how to effectively impart this knowledge to students. To cultivate teachers' PCK, Shulman proposed the following key teacher training methods:

(1) Case Studies: By analyzing real teaching cases, teachers can learn how to integrate subject knowledge with teaching practice and develop their own teaching strategies and styles.

(2) Peer Assistance and Observation: Teachers observe each other's classrooms, share teaching experiences, provide feedback and suggestions, which helps improve their teaching level and refine their teaching strategies.

(3) Participatory Learning: Through group discussions, role-playing, simulated teaching, and other activities, teachers actively participate in the learning process, enhancing their teaching skills and confidence.

(4) Action Research: Encourage teachers to reflect on and research their

own teaching practices, identify problems, and seek solutions to continuously improve their teaching methods.

(5) Expert Guidance: Invite experts in the subject field or experienced teachers to provide guidance to teachers, sharing their teaching experiences and strategies to help novice teachers grow faster.

Shulman believed that these training methods should be designed and implemented in combination with teachers' actual needs and subject characteristics to ensure the effectiveness and relevance of teacher training.

Wiernek, B., & Gurrola, M. (2017) fully described the methods of leadership learning and development in their article.

70% of the time or effect of learning takes place and is achieved in work practice, the main methods include:

(1) job rotation refers to the planned replacement of jobs by employees or groups of employees. In this way, employees can better understand other employees and their tasks.

(2) Job Training is temporary, loose training conducted by more experienced employees that includes careful explanations, demonstrations, and practices supervised by qualified employees.

(3) Specialized instruction allows the participator to visualize the whole task, look at the side, learn an examples and practice.

(4) Shadowing is to first select the object to imitate, observe its behavior, and then repeat the behavior.

(5) Special assignment means to assign someone a task that is beyond their normal duties. Delegating tasks include setting goals and deadlines, achieving goals by participants based on their available resources and methods, and controlling and evaluating the achievement of goals.

(6) Delegation is the temporary occupation of a position by another person due to illness/vacation or other duties. The idea is to test how effective employees are under the new conditions.

(7) Participation in program works refers to a task team where an employee is assigned to a specific program. This allows employees to acquire knowledge and networking skills from a variety of fields.

(8) Group forms of work forms refers to temporary groups formed to solve certain problems. The purpose of group work is to exchange experience or create new knowledge among members.

20% of the time or impact is made and achieved through coaching or mentoring and interaction with others, the main methods include:

(1) Consultations with the supervisor refers to consultations with the supervisor by experienced managers to train successors and develop interpersonal relationships and key skills;

(2) mentoring refers to the support and knowledge transfer provided by the superior to the subordinate.

10% related to training or other formal means of education.it conclude the following methods:

(1) Reading means that read specific texts, books, reports, teaching materials and other educational materials.

(2) Lecturing and practicing refers to the process of verbally introducing appropriate knowledge to a limited number of participants by designated trainers, using technical tools, etc.

(3) Behavioral modeling is the use of a recorded model to demonstrate correct behavior, followed by a trainer playing the role and discussing the correct behavior.

(4) Conference refers to a series of monographs devoted to a particular topic, which can present the latest theories, research results and practice.

(5) Seminar refers to the manner in which a group conducts a discussion around a topic.

(6) Case study is a discussion in small group about real or fictitious cases or happenings.

(7) Games and simulations refer to the use of games to simulate simulations in real life, solving problems and acquiring practical skills in simulations.

(8) Psychological training and games are computer games or simulation scenarios, such as psychodrama, role playing and sensitivity training, which are carefully customized according to individual needs. The purpose is to develop the ability to listen and discuss, as well as a tolerant, sensitive and sophisticated

management style.

(9) Sensitivity training refers to the process in which each participant evaluates each other and tries new behaviors in a small group

(10) Role playing refers to helping to shape certain behaviors by simulating real situations in a work environment in a way that helps to better understand social and professional roles as well as the roles of others inside and outside the organization.

(11) Case problem method refers to presenting a simple situation in practice and providing necessary information for solving the problem through the description of the situation.

(12) The Case study method is based on a comprehensive description of the situation of a particular organization, including general information about the organization and its departments, analyzing specific problems and making appropriate decisions.

(13) Learning refers to the way of using Internet and other technologies to learning the process of training.

(14) Program instruction refers to learning using a computer program that provides general knowledge of the field, asks questions and verifies answers. Programmatic teaching enables learners to train themselves at their own pace, difficulty and time.

Mary, D., Raymond, M. (2013) stated that coaching is a powerful tool to help individuals change and learn. At the heart of the coaching approach is the facilitation of learning through active listening and inquiry, and the provision of appropriate challenge and support. In educational settings, the role of the teacher has shifted from teacher to facilitator, adopting a Socratic approach to coaching, where the teacher begins to help students 'learn rather than teach'. Training is designed to support the development of pupils, teachers, school leaders and the educational institutions in which they are involved.

Aphisayarat, P. (2018) summarized method to strengthen the leadership of school administrators as follows:

- (1) Self-Learning
- (2) Workshop

- (3) Brainstorming
- (4) Knowledge Sharing
- (5) Knowledge formation

Epper, P.M. (1999) stated that a systematic way of self-evaluating, learning from others and improving what you do. Modern business managers consider benchmarking to be much more than simply comparing oneself against a statistical norm or standard. Benchmarking involves first examining and understanding your own internal work procedures, then searching for "best practices" in other organizations that match those you identified, and finally, adapting those practices within your organization to improve performance. It is, at bottom, a systematic way of learning from others and changing what you do.

Business management tools have made their way into the administrative corridors of higher education. We have long compared ourselves to our peers while aspiring to greater levels of enrollment, funding, recognition, and prestige. The kind of benchmarking, or knowledge-sharing, that typically has taken place in higher education, in contrast, is mostly the result of friendly rivalry among respected peers. "Peers" in this case consist primarily of those institutions that most resemble ourselves, whether it be within a particular sector, tier, or discipline. True benchmarking, in contrast, encourages us to look beyond our peers for processes that are similar, and perhaps implemented better, in quite different types of organizations.

Ørngreen R., & Levinsen, K. T. (2017) stated that originally, workshop meant 'a place where things are made or repaired (Merriam-Webster, 2016). Today, workshop means an arrangement whereby a group of people learn, acquire new knowledge, perform creative problem-solving, or innovate in relation to a domain-specific issue. Ørngreen R., & Levinsen K. T. (2017) pointed out three perspectives on workshops, these are:

- (1) Workshops as a means are authentic workshops aimed at domain-specific issues and represent a large body of literature in which the workshop is seen as a means to achieve a goal.
- (2) Workshops as practice focus on investigating the relationships between the workshop and its form and outcomes.
- (3) Workshops as research methodology focus on the study of domain-

related cases using the workshop format as a research methodology.

They have identified three approaches to designing workshops. These are:

(1) The use of cookbooks and guidelines for various workshop formats derived within specific domains. In this approach, choices are legion and formats can be adapted or mixed.

(2) The use of conceptual formats, which prescribes phases, pre-designed activities, roles, and progression.

(3) The use of open formats, which allows participants and facilitator(s) to negotiate and influence the format during the workshop. This form enables the facilitator to intervene on-the-fly as the workshop develops and unforeseen phenomena emerge by introducing challenging participant activities from a conceptual format repertoire.

Pedler M, Burgoyne J, & Brook CUK (2005) pointed that business school staff and CIPD trainers and developers' use of teaching methods, including:

- (1) talk or lecture
- (2) guided reading
- (3) mind mapping
- (4) case study
- (5) role play
- (6) skill practice and feedback
- (7) structured exercises
- (8) coaching
- (9) mentoring
- (10) programs and assignments
- (11) action learning
- (12) self-development group
- (13) biography work
- (14) large group interventions.

Wongsriphueak, T., & Chansirisira, P. (2020) pointed out that to enhance teachers' learning management by using the following methods:

- (1) Self-Learning
- (2) Training

- (3) Mentoring and Coaching
- (4) Creating a Professional Learning Community (PLC)
- (5) Supervision

Olsson A, et al (2010) pointed out action learning refers to group learning that enables development of people and organizations. One core element of action learning is a bottom-up approach to learning through reflection on one's own experience.

In summary, from studying approaches the teacher development from various academics, the researcher summarized that the methods of art teacher development refer to ways and means to help art teachers improve their competence and professional development through a series of systematic strategies, activities and practices. These methods are designed to promote the continuous improvement of art teachers in terms of knowledge, skills, attitudes and values to adapt to changes in the educational environment and the needs of students, and include 1) Self-learning from practical work, 2) Assignment, 3) Job shadowing, 4) Coaching, 5) Training.

4.1 Self-learning from practical work

Sequeira, A. H. (2012) explained Self-Learning method is an individualized method of learning, which is a process in which people proactively self-direct their learning journeys, identifying their own learning goals and holding themselves accountable for reaching them. The key parts of self-learning: Self-evaluation, Setting learning goals, Mobilizing resources, Learning actively, Evaluating learning outcomes. In the rapidly evolving world of work, self-learning and upskilling will help you remain competitive and facilitate your career advancement. While companies can institute formal learning and development programs, the onus is on individuals to consistently engage in learning and enhance their skill sets. The learner is at an advantage to use this form of non-formal mode of education using self-paced learning materials. The Trainer should also look at the three domains of learning viz., cognitive, affective and psychomotor and the emphasis required while designing the learning resource material.

Zimmerman, B.J. (1989, 2002) stated that self-learning is learning in which learners are able to actively monitor, regulate and control their own cognition, motivation and behavior, and that this process of self-regulation can occur in a variety of learning environments, including practical work situations. He argues that learners

learn more effectively and intensively when they are able to set goals, plan, monitor progress and evaluate results in real work situations. Self-learning is a collection of emotions, beliefs, attitudinal mindsets, and cognitive or behavioral processes used to manage learning tasks. Building such mindsets and skills can improve students' academic and career outcomes.

Nima A. Hussein (2020) considered self-learning is the best learning method because it achieves for every learner a learning that is commensurate with his abilities and self-paced learning and depends on his motivation. Self-learning is defined as: organizing the educational material in a manner that allows each learner to achieve progress that is commensurate with his personal capabilities and desires, and to provide educational guidance and assistance in accordance with his personal needs. It is also defined as: a pattern of planned and organized education in which the learner exercises educational activities by himself and moves from one activity to another to achieve the educational goals decided freely and at the speed that suits him, with the help of self-evaluation. He arrives at the characteristics that distinguish self-learning, and they are as follows:

- (1) Taking into account the individual differences among learners.
- (2) The learner bears the responsibility in making his decisions related to choosing the different methods and the appropriate times to achieve the goals.
- (3) The learner's positive interaction with the educational content through feedback and direct reinforcement.
- (4) Self-learning is characterized by its use of the criterion (spoken reference) as a method of evaluation.

Nima A. Hussein (2020) summarized the three characteristics of self-learning:

- (1) Self-learning takes into account the needs and interests of the learner, on the basis of which the designers decide the nature of the curriculum and activities.
- (2) Self-learning is based on basic principles, the most important of which is that the learner determines the methodological goals that he seeks to achieve, and that the speed of presentation of the information to be learned and the skills to be acquired depend on the learner's abilities, desires and goals.
- (3) Self-learning works on compatibility between the concepts and skills to be learned, and the student's need for such concepts and skills so that they are subject to

his abilities.

Freeman, D.L., & Edwards, D.M. (1998) emphasized that self-learning in practical work is a kind of situated learning, i.e. learners construct knowledge through engagement in practice within authentic environments and through interaction with others. They argue that this type of learning helps learners to apply theoretical knowledge to real-life situations, thus deepening their understanding and mastery of knowledge.

Lave, J., & Wenger, E. (1991) argued that learners learn by themselves through observation, imitation and interaction with others in the process of participating in the practice community. This self-learning method emphasizes gaining experience and knowledge from actual work and gradually forming their own practical skills and cognitive framework.

Zdanevych, L, et al (2022) pointed out that in general, self-learning is explained as a process of self-acquisition of knowledge and experience in a particular field, Self-learning is not only a tool for self-development, but also a kind of goal of professional teacher training In this case, the key mechanism of the process is reflection. That is, analysis of their own actions, ways of thinking and speaking is important for the effectiveness of self-learning. Self-observation and self-analysis provide a qualitative understanding of the structure of self-learning and its effectiveness.

In summary, self-learning from practical work refers to the process in which learners are required to actively guide their own learning process, determine their own learning goals and be responsible for their own learning goals without formal or structured guidance. This learning style allows individuals to effectively apply learning skills driven by their own desires and needs. (Nima A. Hussein, 2020).Self-learning from practical work is usually accompanied by trial and error, observation and reflection, and emphasizes experience. In addition, self-learning from work can cultivate adaptability and resilience because learners must overcome challenges and uncertainties on their own.

4.2 Assignment

Corominas, A., & Pastor, R. (2009) stated that the job assignment problem consists of assigning a type of task to each staff member present at the workplace

during each period of the planning horizon. Normally, the assignment of tasks is made once a schedule has been assigned to each worker. However, it is also possible that the assignment of tasks to workers will determine their schedule; in this case, there is a set of additional constraints that must be observed, allowing feasible work schedules to be created. The simplest example of the job assignment problem is found when the number of tasks to be assigned and the number of available workers are the same, and when assignment to a period t is independent of the assignment.

Chauvet F, Proth J M, & Soumare A. (2000) stated that the goal of the well-known Generalized Assignment Problem (GAP for short) is to assign tasks to employees such that the workload of an employee does not exceed his capacity, while minimizing the total cost. They consider the case when the number of employees who are supposed to perform a set of tasks is greater than the number of tasks. The goal is to minimize the time required to perform all the tasks, that is the make span. Two cases are considered:

(1) Each employee is allowed to perform at most one task (single job case). We propose an algorithm (Algorithm 1) which is based on a dichotomy approach. At each iteration, a linear programming problem is solved. This algorithm leads to an optimal solution.

(2) Each employee is allowed to perform more than one operation (multiple job case). To solve this problem, we propose an heuristic and a branch-and-bound approach which takes advantage of the two previous algorithms to obtain an upper bound of the optimal solution.

Patchara Wanichawasin (2007) stated that the issue of assignment involves the allocation of one type of task to each staff member in the workplace at each stage of the program scope. Typically, task assignment takes place after each worker has been assigned a program. However, it is also possible that the assignment of tasks to workers determines their schedules; in this case, a series of additional constraints must be observed in order to develop a feasible work schedule. The simplest example of a assignment problem can be found when the number of tasks to be assigned is the same as the number of available workers and the tasks assigned to a period t are independent of the assignment.

Norman, Bryan A., et al. (2002) stated organization effectiveness is assumed

to be a function of the productivity, output quality, and training costs associated with a particular worker assignment. When assigning workers, consider both their technical skills and their human skills, and permits the ability to change the skill levels of workers by providing them with additional training. Organizational efficiency is assumed to be a function of productivity, output quality, and training costs associated with a particular worker's task. When allocating workers, consider their technical skills as well as their human skills, and allow them to change the skill level of workers by providing additional training. This will lead to higher work efficiency than considering only the technical ability of workers.

In summary, Assignment refers to the assignment of personnel to specific jobs on a case-by-case basis or the assignment of specific tasks to personnel, which may be short-term, long-term, full-time or part-time, based on a variety of factors, including an individual's skills, experience and availability, as well as the nature and requirements of the task, in accordance with actual needs. Work assignment is an important concept at both the organisational and individual levels, helping to ensure that resources are used efficiently and contributing to the achievement of individual and team goals.

4.3 Job shadowing

McCarthy, John, et al. (2006) examined job shadowing as part of experiential learning. they rated the usefulness of all educational activities in the course. Then they found that shadowing was the highest rated educational activity. It surpassed speeches, tests, cases, outside speakers, and videos for “usefulness”, experiential learning associated with job shadowing was much more powerful than using the standard case study teaching tool.

Danijela, M. (2021) stated that job shadowing is an opportunity to learn about or explore an occupation (or job) that interests the student. However, this does not mean that job shadowing only involves the elements of one's career planning. On the contrary, job shadowing allows the student to see how the knowledge and skills acquired at the faculty can be applied in real-life situations. They learn by observing and listening, as well as through the daily reflection which they perform with their host. students will think about the experiences they have gained during job shadowing and, on their basis, conceptualize their knowledge (abstract conceptualization).

Moriarty, M. (2013) stated that Job shadowing is a workplace-based learning experience that introduces students to career areas and provides the opportunity to observing a professional in the field. It has been shown to have a positive impact on student attitudes about education and work, job shadow experience impacts the knowledge, excitement, attitudes and persistence.

Mader F H, Mader D R D, & Alexander E C (2017) stated that Job shadowing has a long history of utilization. It is primarily considered a way for youth to become aware of the world-of-work through programs sponsored by schools or social organizations, and is employer-developed programs aimed at internal advancement or as a recruitment tool for potential employees. Job shadowing experience as a means not only to provide real-world exposure for the student, but also as a way to generate real-time data from the professionals to be utilized as a basis for class discussion.

Padron, T. C., et al (2017) stated that Job shadowing is a career exploration activity where students can spend time with someone at work to learn what it is like to do that job on a daily basis, allows students the opportunity to explore and experience first-hand the “world of work”. Students can connect with professionals, engage in cooperative learning environments. Students can also connect their classroom experiences to the work place and gain valuable first-hand knowledge. It is a vital link in making important career connections and can be rewarding.

In summary, Job shadowing is a vocational training method that allows learners to familiarize themselves with the specific job content, responsibilities, skills required and working environment of a particular occupation or position by following and observing experienced employees carrying out day-to-day tasks. The advantage of this method is that it allows learners to gain a deeper understanding of the actual operation of a particular occupation or position, so that they can better assess its suitability and build up relevant work experience and skills.

Specifically, job shadowing involves an experienced employee (referred to as a 'shadow mentor' or 'shadow teacher') mentoring one or more learners (referred to as 'shadow learners' or 'interns') to carry out on-site observations and practical activities. In this process, learners accompany their shadow mentor in their daily work, observing tasks, procedures, operational techniques and ways of communicating with colleagues, students and others. The opportunity to pose questions, gain insight into

the intricacies and challenges of the occupation, and even engage in practical exercises, is also afforded to learners.

4.4 Coaching

Coaching is no longer the exclusive power or responsibility of leaders; it permeates the entire organization, including individuals and teams. Many companies are now creating a coaching culture within their organizations by training managers in coaching skills or employing internal coaches. (John, L. Bennett, 2009) Research has shown that organized coaching has a positive effect on improving leadership skills, increasing charismatic behaviour and the ability to motivate and influence others (Kampa-Kokesch, 2002).

Bennett, J., & Bush, M. W. (2009) stated that coaching consists of a dialogue focused on discovery and action to help the person, team or group being coached achieve a desired outcome or goal. The focus is on the person or team being coached and the coach acts as a facilitator or mentor in the collaborative process. The purpose of coaching is to help the individual or group become self-directed in their learning and development.

Julie Starr (2012) stated that coaching as one person initiating a conversation or series of conversations that is beneficial to another person's learning and progress. The key to coaching is not the time, setting or content, but is defined by the impact and outcomes it produces. Coaching must be a conversation with the coaches as the focus of the conversation. The use of listening, questioning and reflective conversation skills is intended to have a positive impact on the coaches, causing the coaches to reflect on the conversation and benefit from the reflection.

Alipour, M., Salehi, M., & Shahnava, A. (2009) proposed that the coach has the following attributes:

- (1) Use of deductive skills.
- (2) The coach is not necessarily an expert on this issue. Having a little knowledge usually helps, but sometimes it interferes.
- (3) The beneficiaries of the process are individual employees and company employees.
- (4) Coaching courses can be measured by time.
- (5) The coach can do it without preparation.

(6) Sometimes it is not official, but it can also be official.

(7) Appreciating coaches is a must. Mutual respect and mutual understanding between coaches and coaches will be very helpful.

Several approaches to coaching have been used successfully. Although they are listed separately below, they are often combined to employ a hybrid approach. As show Table 5.

Table 5 Approaches to coaching

Methods	Explaining concepts
Behavioral coaching	The Behavioral Approach is based on a goal-focused and action-orientated approach and is designed to help teachers and schools understand how their behaviour affects others and the environment, and to provide skills and strategies to improve their behaviour.
Solution-focused coaching	Solution-focused coaching is easily learnt and can be widely used by all actors in the education system and has been used successfully in blended approaches to developing life-skills.
cognitive-behavioral coaching	Cognitive coaching, which emphasizes reflection, self-analysis and self-evaluation is used to assist teachers to examine their thinking behind their teaching practices (Costa, 1992; Costa & Garmston, 2004).
Instructional coaching	Instructional coaching is a specialist and content-based approach which has been shown to be effective in upporting teachers' professional development and higher student outcomes (Cornett & Knight, 2009).
Executive coaching	Executive coaching or coaching for educational leadership that supports head teachers, educational administrators, and teachers transitioning into management roles as stand-alone interventions or integrated into wider continuing professional development (CPD) programs are in use around the world (Bush, Kiggundu, & Moorosi, 2011).

Table 5 (Continued)

Methods	Explaining concepts
peer coaching	Reciprocal peer coaching between pairs of teachers, and the instructional coaching approach (Knight, 2004a; Kowal & Steiner, 2007) cited above, which supports teachers in implementing research-based teaching practices. These coaching relationships are characterized by equal relationship involving modeling, observation, feedback, reflective dialogue, and classroom practice.
Positive organizational scholarship	Positive psychology and particularly positive organizational scholarship have yielded coaching approaches aimed at supporting change at individual, group, and organizational levels, e.g. appreciative inquiry , appreciative coaching and strengths-based coaching .The focus is on a more holistic view of education building on the strengths of the individual or the system, and developing skills that go beyond the traditional academic subjects to enhance wellbeing, so creating a virtuous learning cycle.

Peer coaching or mentoring is considered a powerful form of transfer in teacher professional development. Mentoring for teacher development needs to rely on the support of peers and experts. Collaborate with colleagues, commit to learning, and apply new approaches to daily practice; seek expertise to extend skills and knowledge and model good practice.

In summary, Coaching refers to a comprehensive, systematic and personalised coaching process, in which the coach plays the role of a guide and supporter, listens, asks questions, gives feedback, emphasises the individual's intrinsic motivation and self-worth, encourages coaches to take the initiative to think, self-reflect and learn continuously, and helps them to clarify their goals, formulate plans, solve problems and overcome obstacles. This process focuses not only on the personal growth of the coaches, but also on the overall effectiveness of the team. By stimulating the potential of team members and improving team communication and

collaboration, coaching helps to achieve the team's overall goals.

4.5 Training

Schultz, T. W. (1990) elaborated on the theory of human capital and emphasized the central role of education and training in the formation of human capital. He believes that through education and training, people can acquire knowledge and skills, thus improving production efficiency and innovation capabilities.

Nie Weijin (2023) analyzed the "experiential participation" teacher training model, which has three main characteristics:

(1) Integration of training content: Modular courses. The training course includes a first level course module, a second level teaching unit, and a third level teaching theme.

(2) Construction of Training Field: Realistic Environment. Studying teaching theories in undergraduate institutions with a teacher training background; Through on-the-job learning, following the leader and members of the national teaching innovation team for educational and teaching learning, and entering a production education integration oriented enterprise for practical teaching and learning.

(3) Training method selection: experiential learning. The participating teachers follow the national teaching innovation team to listen and give lectures; Provide on-the-job training in industry education integrated enterprises; Provide feedback and reflection on the experience process under the guidance of experts.

Shulman, L. S. (1986) emphasized teacher training central role in improving educational quality and promoting educational reform. He believes that teacher training is not merely about imparting professional knowledge and skills to teachers, but more importantly, it is about cultivating their innovative mindset and spirit of exploration. .At the same time, he also emphasized that teacher training should be a continuous process, and the training aims to help teachers adapt to the constantly evolving and changing educational environment, enabling them to learn reflect, practice and grow continuously to enhance their teaching level and quality, so as to provide more quality educational services.

Ding Wenya (2024) emphasized that teacher training is an important link

in strengthening the construction of the teaching staff, and is a fundamental and long-term task. Its main purpose is to enable teachers to improve their ideological and political qualities, improve their teaching skills and research level, enhance their teaching and educational abilities, truly possess the knowledge and abilities necessary to fulfill their job responsibilities, and promote the professional development and growth of teachers. He pointed out that there are five main ways and methods of institutionalized training:

- (1) Pre-service training for new teachers;
- (2) In-service education improvement for teachers;
- (3) Interdisciplinary knowledge training for teachers;
- (4) Overseas training and exchange for teachers;
- (5) Teaching skills training for teachers.

In summary, Training refers to the formulation of individualised training plans and formal curricula according to the needs and characteristics of art teachers, and the enhancement of art teachers' professional abilities, teaching standards and overall quality through systematic teaching activities, seminars, lectures and other forms.

Concept and Theory of Program and Program development

1. Definition of the program

The meaning of the word program to mean schedule and show program. And there are scholars who have given many meanings to the word program as follows:

Chakkree Tonchuea (2012) defined the term program as a set of activities that shows the details of the development or strengthening guidelines, it aims to develop or strengthen the target group to achieve the set goals.

Weiss, C.H. (1998) explained the meaning of a program as: It is a set of activities or services designed to achieve a specific purpose. with a specified starting point and ending point.

Patton, M.Q. (2011) described programs as A coherent set of activities designed to achieve a specific goal or objective. and proceed in a systematic and orderly manner

Rossi, Lipsey, & Freeman (1999) defined a program as a set of activities or

services or interventions designed to achieve specific results or objectives.

Chettha Khaklong (2014) defined a program as a plan or guideline that an organization has systematically set up to be used as a guideline for performing work or performing any duties to achieve the objectives or goals of each organization.

Brownell, M. T. et al (2005) stated that across the two studies, there are seven features common to effective teacher education programs in general education: (1) coherent program vision, (2) conscious blending of theory, disciplinary knowledge, and subject-specific pedagogical knowledge and practice, (3) carefully crafted field experiences, (4) standards for ensuring quality teaching, (5) active pedagogy that employs modeling and promotes reflection, (6) focus on meeting the needs of a diverse student population, (7) collaboration as a vehicle for building professional community lived according to a predetermined plan.

Bergquist, W. H. (1975) stated that a comprehensive teacher development program operates simultaneously at three levels - attitudinal, process and structural - and none of them is possible without the other. Between the components, however, and between the activities within each component, there are different relationships of action and different levels of force.

In summary, a program refers to a process of activities or a set of activities designed in a systematic sequence to develop Enhance knowledge to achieve goals or objectives.

2. Components of a program

Yves Kalberer (2024) described the main components of a training program include:

(1) Goals—Learning objectives and Training purposes. Learning objectives is about competence during or immediately after ending training. The specifications may include what the participants shall gain of knowledge, skills, or attitudes.

(2) Settings – Framework conditions. Settings are framework conditions which make learning possible or place a limitation on learning, for instance teaching aids, time, room facilities and artefacts.

(3) Participants - Learning qualifications

Learning qualification means the knowledge, attitudes, and performance the

participants face the training with.

(1) Content. The content covers questions about what - the thematic issues that the training modules should cover. The design phase must determine what the learning is comprised of, and how one selects to approach it. This is closely linked to the goals.

(2) Learning process. The learning process covers questions about how. This includes both the progress and educational approach regarding content order and method specifications.

(3) Evaluation may include evaluating all or some of the didactical elements; goals, content, learning process, learning qualifications, and settings.

Pimpaporn Pimpko (2014) defined the components of a program as consisting of 5 components: 1) principle, 2) objective, 3) content, 4) procedure, and 5) evaluation.

Darling-Hammond, L., & Bransford, J. (2019) studied of seven programs found common features among a group of large and small programs located in both public and private colleges and universities. These features include:

(1) students, so that they can gain access to the experiences, practices, theories, and knowledge of the profession.

(2) A shared vision of good teaching that is consistent in courses and clinical work;

(3) Well-defined standards of practice and performance that are used to guide the design and assessment of coursework and clinical work;

(4) A common core curriculum grounded in substantial knowledge of development, learning, and subject matter pedagogy, taught in the context of practice;

(5) Extended clinical experiences (at least thirty weeks) that reflect the program's vision of good teaching, are interwoven with coursework, and are carefully mentored;

(6) Strong relationships, based on common knowledge and beliefs, between universities and reform-minded schools;

(7) Extensive use of case study methods, teacher research, performance assessments, and portfolio examinations that relate teachers' learning to classroom practice.

Kirkpatrick, D., & Kirkpatrick, J. (2006) pointed out that each of the following factors should be carefully considered when planning and implementing an effective training program: 1) Determining needs 2) Setting objectives 3) Determining subject content 4) Selecting participants 5) Determining the best schedule 6) Selecting appropriate facilities 7) Selecting appropriate instructors 8) Selecting and preparing audiovisual aids 9) Coordinating the program 10) Evaluating the program.

National minority aids council (2015) described a basic program development model. The main components include:

(1) Conduct Needs Assessment: describe your target audience, identified problem, program planning process and need for your agency to address the problem.

(2) Develop Mission, Goals and Objectives: develop goals that accurately reflect potential solutions to the problems found during the needs assessment. Establish realistic goals that describe how the program will affect the target population.

(3) Identify Funding Sources: determine how much money is needed and develop a list of funding sources.

(4) Assign Leadership Tasks: identify perspectives and people who will lead each step.

(5) Design Program: Establish the details of your final program. Identify collaborators. Describe your staffing needs. Determine how you will evaluate it and how much it will cost. Create a budget that includes salaries and benefits, shared costs, program costs, and indirect costs.

(6) Implement Program: Conduct media campaign, recruit volunteers, develop collaborations and implement activities.

(7) Evaluate Program: identify how you will verify documents and qualify program activities and their effects.

Suwat Junsuwan (2011) mentioned the components of the program that are important and necessary for educational management. Which will make the educational management more effective. The components include the program 1) objectives, 2) content, 3) process and 4) evaluation.

Olympic Training & Consulting (2016) showed that designing an adult education program needs to include the following elements:

(1) Study of available information for the detection of the framing factors for the development of the training activities and the implementation of learning.

- The study of the existing situation, the detection of the basic problems and the detection of the target group.

- The identification and analysis of the important data, social – economic situation, professional characteristics, culture of the target group.

- Investigation and assessment of the training needs.

- Assessment of the available resources (material, venues, trainees, staff etc.) for training implementation

(2) Identification of training goals and objectives, include level of knowledge, skills level, competence level, and attitudes level.

(3) Determination and management of training content

(4) Selection of the appropriate training methods, techniques, and material

(5) Design of the evaluation plan.

Aphisayarat Prarasri (2018) obtained the components of the program for the development of the program to enhance learning leadership of school administrators under the Office of the Secondary Education Area, consisting of the 1) principles, 2) objectives, 3) development concepts, 4) contents, 5) structure, 6) learning activities, 7) methods, 8) resources, and 9) measurement and evaluation.

In summary, from studying the elements of the development program from various academics, it can be concluded that the elements of the program include 1) principles, 2) objectives, 3) contents, 4) development process, 5) evaluation program.

(1) Principles are the basic guidelines and norms governing the content of program work, the desired outputs, and decisions about program implementation. It guides the various stages of program planning, development, implementation and closure, and helps the program team to make sound judgements when faced with decisions to ensure that the program can be carried out successfully in accordance with the established objectives and requirements.

(2) Objectives are about competence during or immediately after ending training, concern the specific results pursued by training. The objectives must meet the educational needs of the program and correspond to the real potential of learners. Usually learning objectives/goals are divided in performance areas and

levels. Three target areas are most often distinguished between: (1) knowledge, (2) attitudes, and (3) skills. Knowledge objectives say something about the knowledge and intellectual performance that participants will acquire. Attitudinal objectives indicate what the participants will acquire in the emotional, attitudinal and value areas. Skills objectives say something about what the students will acquire in the practical area. A comprehensive formulation of learning objectives consists of the intended outcome plus the display condition plus the success criteria. (Olympic Training & Consulting Ltd, 2016)

(3) Content refers to the main elements and components involved around the program theme in order to achieve the program objectives, including the specific details of the task or activity. There are three aspects of content setting to consider: Items or topics to be covered, subjects that modules shall cover, and ensure link to the learning goals. (HES-SO, Yves Kalberer, 2024) Selecting the content is the selection of the content to be provided to the person to be developed that is consistent with the learning objectives specified by the program. Organizing the content is the decision of which level of the selected content should be provided to the person to be developed, taking into account the learning psychology development of the person to be developed. (Taba, 1962)

(4) Development process is the collection of phases and activities that a program undergoes throughout its lifecycle, from program initiation to program completion. The program development process is a systematic process that encompasses the planning, development, implementation and closure phases of a program, which take place in a certain order, each with its specific objectives, tasks, outputs and milestones. The development process is narrowly defined as The learning process covers questions about how. This includes both the progress and educational approach regarding content order and method specifications. (HES-SO, Yves Kalberer, 2024)

(5) Evaluation program has been defined as systematic inquiry that describes and explains the policies' and program's operations, effects, justifications, and social implications (Mark et al.,2000) or the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about

future programming (Patton,1997). Program evaluation is one element of results-oriented management, the essence of evaluation is determining what is of value in a program. The work revolves around understanding program goals (if available), setting criteria for success, and gathering information to determine whether the criteria are being met as a result of program activities. Program evaluations focus on examining the characteristics of a portfolio of programs rather than assessing one program at a time and often use retrospective information about program outputs and outcomes. (Institute of Medicine (US) and National Research Council (US) Committee on the Review of NIOSH Research Programs, 2009)

3. Process of creating a program

Wayne Welsh (2006) proposed a seven-stage model of program planning and development.

Step 1: Analyzing the Problem

What need or problem is the program expected to address? This step involves collecting information about dimensions of the perceived problem, the history of the problem, the stakeholders affected by the problem, and potential causes of the problem

Step 2: Setting Goals and Objectives.

Goals are broad aims of the program; objectives specify explicit and measurable outcomes; We should also be able to measure within-individual changes.

Step 3: Designing the Program or Policy.

This stage requires specifying, in as much detail as possible, who does what to whom, in what order, and how much? It is the “guts” of the program or policy, including its staff, its clients.

Step 4: Developing an Action Plan.

Specify the sequence of tasks needed in order to successfully launch or implement the program or policy. These include technical and interpersonal tasks.

Step 5: Developing a Plan for Monitoring Program/Policy Implementation.

Process evaluation refers to the collection of information to determine to what degree the program/policy design or blueprint (Stage 3) is being carried out as planned. Are program activities being carried out as planned? Is the intended target population being reached? Are staff members carrying out assigned responsibilities?

Step 6: Developing a Plan for Evaluating Outcomes

The goal of this stage is to develop a research design for measuring program outcome (a specific, intended change in the problem, as defined by objectives).

Step 7: Initiating the Program or Policy Plan.

Stage 7 involves putting into motion the program or policy design and action plan (stages 3 and 4), monitoring program or policy implementation (stage 5) and, if appropriate, evaluating outcomes (stage 6). Once evaluation data are analyzed, feedback is provided to all stakeholders, and the program/policy design should be thoroughly reassessed to determine where revisions are necessary. Decisions may have to be made about whether a program should be continued.

Barr, M.J. & Keating, L.A. (1990) proposed a five-step program model for program development. The first step is to assess the needs, environment and resources of the participants. The second step is to create a program plan in terms of goals, methods, time and other aspects. The third step is to implement the program, during the implementation of the program, process evaluation and product evaluation should be carried out. The fourth step is use information obtained from process and output evaluations to inform decisions about the future of the program. And the fifth steps is evaluation and administrative decision, decision to continue the program. or terminate the program or take steps to improve it.

Ediyanto, E. et al. (2018) explained the special Guidance Teacher Development and Competency Development Training program includes three phases of activities, (1) namely preparation, (2) implementation and (3) evaluation and follow-up plans.

Conklin, N. (1997) mentioned the program development model includes (1) planning; (2) design and implementation; and (3) evaluation informed by organizational context, personal interest and expertise, and the needs of the community and society (Figure5):

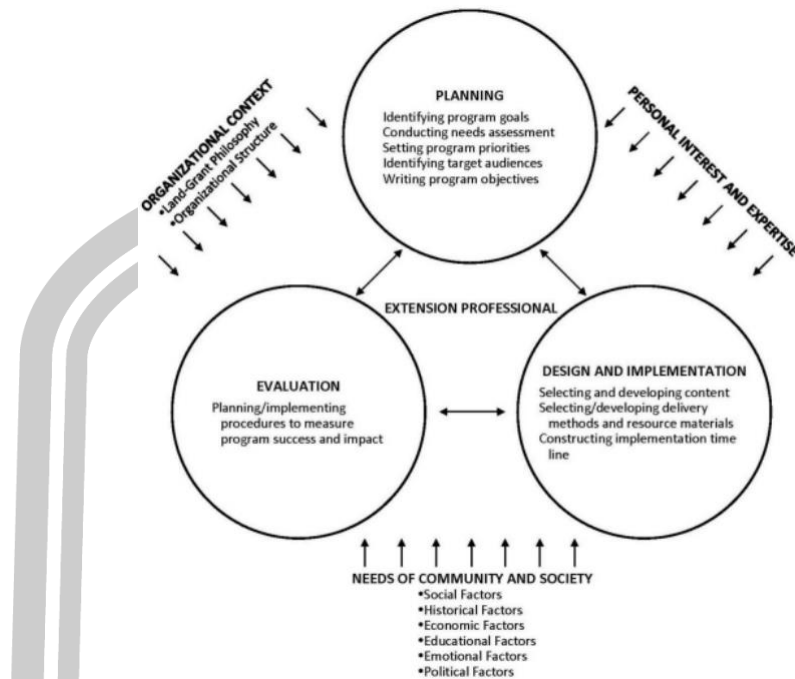


Figure 5 The program development model (Source: Conklin, 1997)

Boone, E., Safrit, D., & Jones, J. (2002) developed a conceptual programming model to benefit institutional organizations. The seven interrelated phases of Boone's model including:

Step 1: Formulate the organization program framework.

Step 2: Adopt the program framework.

Step 3: Organize human resources at the operational level needed to plan an educational program.

Step 4: Plan or make decision at the operational level.

Step 5: Set up a timetable.

Step 6: Implement the plan.

Step 7: Evaluate the plan.

Taba, H. (1962) has a concept about the curriculum development process which is similar to the program development which has 7 steps as follows:

(1) Diagnosing the needs of the person to be developed is an important step.

The first step is to decide what should be developed by studying the basic information about the person to be developed, such as their background and needs.

(2) Determining the objectives to be a guideline for the development program clearly stating that the program to be developed aims to develop what characteristics of the person to be developed.

(3) Selecting the content is the selection of the content to be provided to the person to be developed that is consistent with the learning objectives specified by the program.

(4) Organizing the content is the decision of which level of the selected content should be provided to the person to be developed, taking into account the learning psychology development of the person to be developed.

(5) Selecting the learning experience for the person to be developed is the selection of the learning experience that is consistent with the content and objectives of the development program.

(6) Organizing the learning experience for the person to be developed is the decision of what learning experiences should be provided to the person to be developed. And what methods should be used to manage learning in order to be consistent with the content and learning objectives in order to develop according to the suitability of the person to be developed?

(7) Evaluation is the evaluation of the person to be developed according to the purpose of the development program, whether the learner has the characteristics that the program requires or not, in order to meet the purpose of the program.

Bar, M.J., & Keating, L.A. (1990) proposed a five-step program model for program development (Five-step Model for Program Development) as follows:

Step 1 Assessment consists of: 1) Assess the needs of program participants 2) Environmental assessment 3) Evaluate resources including personnel, budget, and physical resources.

Step 2 Planning consists of: 1) Developing a planning team 2) Goal setting Objectives and Evaluation 3) Choosing a practice method 4) Organizing training for relevant personnel 5) Procurement of the required budget 6) Determination of time taken until the end of the program.

Step 3 Implementation consists of: 1) Assigning responsible persons to be appropriate to their skills, abilities, and work to be done. 2) Implementation of the plan 3) Process evaluation and product evaluation

Step 4: Evaluate after the program ends. (Post-assessment) Use information obtained from process and output evaluations to inform decisions about the future of the program

Step 5: Administrative Decision is the decision to continue the program. or terminate the program or take steps to improve it.

Mahmoud Hassan Ibnouf (2012) proposed framework for program development. The framework includes seven phases.

Step 1: Formulating broad policies, procedures and objectives for program planning.

Step 2: Preparing for program planning.

Step 3: Organizing for program planning.

Step 4: Planning the program:

- (1) Collecting the facts.
- (2) Analyzing the situation.
- (3) Identifying needs and problem
- (4) Determining objectives.
- (5) Developing a plan of work.
- (6) Writing the program document.
- (7) Preparing the calendar of work.

Step 5: Implementing the program.

Step 6: Evaluating the program.

Step 7: Reconsideration.

In summary, from studying the process of creating a program from various academics, it can be concluded that the process of creating the program to enhance competence of art teachers with the following steps: (1) Investigating the components of arts teachers competence. (2) Exploring the existent state, desired state and the priority needs for art teachers competence development. (3) Creating a program to enhance the competence of art teachers. (4) Evaluating of the suitability and feasibility of the program to enhance the competence of art teachers.

4. Evaluation of program effectiveness

Kirkpatrick, D. & Kirkpatrick, J. (2006) proposed that the effectiveness of training programs be assessed through four levels, which are:

(1) Reaction: Evaluates the satisfaction of the trainees with the training program, including their perceptions of the trainer, the training content, the facilities, the methodology and the personal gains. This level of assessment is usually carried out immediately after the end of the training, through questionnaires or interviews and other ways to collect data.

(2) Learning assessment: Determine the degree of learning gained by the trainee in terms of knowledge, skills, attitudes and so on. This is usually done through written exams, practical tests or pre- and post-test comparisons.

(3) Behavioral assessment: to examine the degree to which the trainee will learn to apply the knowledge in the work. This level of assessment is usually carried out some time after the end of training (e.g., 3 to 6 months), and data are collected through direct observation, interviews or 360-degree feedback, performance testing, etc.

(4) Results assessment: calculates the economic benefits or organizational level changes brought about by the training, such as productivity improvement, cost reduction, and customer satisfaction enhancement. This level of assessment focuses on the overall impact of training on the business or organization, and requires the collection of a wider range of data and long-term tracking and analysis. This can be done through questionnaires, performance targets, etc.

In summary, the Koch Training Evaluation Model provides a comprehensive evaluation framework from response to outcome, which helps to systematically measure the effectiveness of training activities.

Daniel Stufflebeam proposed a comprehensive evaluation model (CIPP) in the 1960s. The model consists of four key stages.

(1) Context Evaluation

- The main objective is to understand the context in which the program or program is situated.

- This includes analyzing factors such as the nature of the problem, the characteristics of the target audience, relevant policies and the environment.

- Through context evaluation, the necessity and feasibility of the program or program can be judged, as well as identifying training needs and setting training objectives.

(2) Input Evaluation

- On the basis of the background evaluation, the conditions and resources required to achieve the objectives are evaluated.

- It involves gathering information on training resources, assessing the adequacy and reasonableness of resources, and determining how to effectively use available resources to meet training objectives.

- Input evaluation also involves consideration of whether external resources are needed to assist in the overall strategy of program planning and design.

(3) Process Evaluation.

- Designed to monitor the implementation of a program or program to ensure that it is progressing towards its intended goals.

- Through continuous monitoring, inspection and feedback, problems are identified and improvements are made.

- Process Evaluation provides feedback to those responsible for the implementation of the training program so that they can make timely and continuous corrections or improvements to the implementation of the training program.

(4) Product Evaluation:

- Evaluation of the results achieved by the program or program, including expected results and unintended results.

- The main task of outcome evaluation is to measure and explain the objectives achieved by the training activities and to judge whether the program or program is effective or not.

- Outcome evaluation can be conducted not only after the training is completed, but also during the training process, so as to make timely adjustments to the training strategies and methods.

The CIPP model is characterized by its whole process, process and feedback. It stresses that evaluation should not only focus on the results, but also on the background, inputs and process, so as to provide more comprehensive information for program or program improvement. Through the application of the CIPP model, program or program managers can make better decisions and promote the continuous improvement and optimization of the program or program.

Li Baomin, & Yan Hanbing (2017) explained a quality assessment of teacher distance training based on the CIPP assessment model, including

(1) Pre-training preparation assessment: carrying out background assessment and input assessment Diagnosis of teachers' learning needs through pre-training questionnaires, interviews, etc., and assessment of the background of different teacher-learners as well as the learning needs situation, the purpose of the assessment is to carry out the classification of classes and stratification, which will provide a basis for the design of teaching. At the same time, the readiness related to the platform and resources is assessed through the readiness checklist.

(2) Quality monitoring and evaluation during training: Strengthening process evaluation During the training process, the platform is used to comprehensively monitor the learning activities of the students and the participation of the tutors. Through the student learning records, teaching records of assistant tutors, thematic forums and other timely understanding of the overall teaching situation, and through regular bulletin reminders, SMS notifications, learning notifications, etc., to promote teachers and students to grasp the rhythm of distance learning, sharing teacher-student interactions and learning and training results.

(3) Post-training quality assessment and summary: result-oriented assessment Post-training quality assessment is mainly through questionnaires, students' works and assignments, students' testimonials, teacher-student dialogues and students' data analysis of the learning process, and the application of the learning situation, etc., which provides direct feedback on the assessment of the learning effectiveness of the students; at the same time, through the questionnaires of the tutors and instructors, training summaries, and summaries of assignments, etc., which provide feedback on the teacher-student interactions and the students' learning situation. Learning situation.

Rossi, R. J., & McLaughlin, D. H. (1979) pointed out establishing evaluation objectives requires formal, frequent, and extensive interaction among program evaluators and administrators. The fundamental purpose of this interaction is to obtain from administrators the information necessary to make the most effective choices in planning and carrying out evaluations. Three techniques are described that can be used to ensure that this interaction is constructive:

(1) prepare a systems analysis of the program, which involves three subtasks. The purpose of carrying out a systems analysis is to describe clearly the intended processes by which a program accomplishes its aims.

(a) identify major program cycles. Identification of program cycles and variables of importance within each cycle can be made by examining descriptive written material concerning the program and conducting preliminary interviews with program staff. It is especially important to identify these cycles and variables at an early stage in the evaluation process, so that one can begin to consider :which cycles are likely to be most important to achieving impact and which variables in a given cycle are likely to be the ones for which indicators will be needed.

(b) hierarchically order program objectives. The hierarchical ordering of program objectives allows one to identify specific variables (related logically to more general goals) that can be monitored in evaluation. More precisely, target behaviors and indicators of these behaviors can be developed for each of the most specific variables identified by the hierarchical ordering, and (some of) these indicators can be selected for further study as measures of overall program effectiveness.

(c) develop a rationale for the program. A program rationale hypothesizes cause-and-effect relationships between input, process, disposing condition, and outcome variables that are identified in the systematic explication of major program cycles. By making these relationships explicit, it is possible to trace the prospective impacts of particular operations that can affect whether and to what extent a program will achieve its intended long-term impacts.

(2) systematically identify potential evaluation issues.

Evaluation issues can be derived directly from the systems analysis. A particular causal relationship that is hypothesized between two or more variables may be chosen as an evaluation issue to be more closely examined.

(3) evaluation of information needs as a function of decision-making responsibilities.

Once the categories of information that can be collected and the costs that are likely to be incurred during data collection are determined by the systems analysis and generation of potential evaluation issues and associated measurement

requirements, the evaluator must work to identify the current information needs of decision makers. Although it is reasonable to consider that an evaluation is conducted primarily to serve the decision-making purposes of the central administrators of the agency, care must be taken to assess the information needs of program participants at all levels so that they too can make rational decisions.

Zhu Hui. (2023) explained the construction of the evaluation system of the 'National Training program' program. The evaluation is divided into three stages:

(1) The diagnostic evaluation before training mainly includes three indicators: 'demand analysis', 'implementation program' and 'curriculum'.

(2) The formative evaluation during the training includes two indicators: 'organizational management' and 'trainee participation'.

(3) Post-training summative evaluation mainly includes four indicators: 'training effect', 'summary material', 'post-training follow-up' and 'work highlights'. 'Four indicators are included in the post-training summative evaluation. Training effect. The training effect is evaluated in four dimensions: satisfaction, mastery, enhancement and improvement.

The evaluation is divided into four levels:

(1) Trainee response: using the questionnaire method, through the satisfaction questionnaire to assess the satisfaction of the trainees.

(2) Learning gain: with the help of self-tests before and after training and trainees' training experience, the degree of achievement of the training objectives; their own knowledge and ability to improve, teaching awareness and conceptual change. Enhancement of knowledge, teaching awareness and conceptual change

(3) Work application: using questionnaires, interview forms, and classroom observation evaluation forms to assess: the application of training learning to actual work; changes in teaching behaviour; improvement of teaching quality; and promotion of professional development.

(4) Organizational performance: using the interview method and proof of results of educational and teaching activities to assess the impact on student learning; the performance of leading and radiating roles within the organization; and the promotion of school development.

In summary, from the study of the effectiveness evaluation of the aforementioned program, it can be concluded that the effectiveness evaluation of the teacher training program 1) should emphasis should be placed on the combination of process evaluation and summative evaluation, including pre-development evaluation, development evaluation and post-development evaluation. 2) should focus on participants 'satisfaction, participants' reactions, participants 'learning, participants' use of new knowledge or skills, and organizational support and change. 3) should be a combination of qualitative and quantitative assessment. Quantitative assessment based on questionnaires and standardized tests, combined with qualitative assessment based on interviews, observations, logs and other case studies, and case analysis, with program stakeholders as the source of data collection, including tutors, trainees, support service teams and managers.

Context of Higher Education Institution under the background of New Liberal Arts in China

1. The conceptual connotation of New Liberal Arts

Liu Yanfang, et al. (2022) explained that the concept of "New Liberal Arts" is first proposed by Hillam College in the United States, which identified the New Liberal Arts as a comprehensive learning method. That is to say, the intersection of multiple traditional liberal arts subjects and the integration of them with modern technical means. Currently, the academic community does not have an accurate definition of "New Liberal Arts".

Liberal Arts is the abbreviation of "humanities and social sciences" (or "philosophy and social sciences"), and is the collective name for humanities and social sciences. Among them, humanities mainly study human concepts, spirit, emotions and values; social sciences mainly study various social phenomena and their development laws. According to "Undergraduate Major Catalog of General Colleges and Universities (2012)", in addition to science, engineering, agriculture and medicine, the disciplines such as philosophy, economics, law, education, literature, history, management and art are basically All can be included in the category of "Liberal Arts".

Yan Bing, & Zheng Keling (2019) explained that the “New Liberal Arts” should maintain the characteristics of liberal arts while exploring new research fields and methods of liberal arts from a multidisciplinary perspective through methods such as internal integration of liberal arts and cross-disciplinary integration of liberal arts and science. This is a deep reflection on the complex issues in the development of science and technology and humanities and society. It can be innovated at two levels: first, the innovation of the research field and content system of humanities and social sciences. Second, the use of new talent training concepts to reconstruct the talent training methods and systems of liberal arts majors.

Fan Liming (2020) pointed out that in China, the concept of “New Liberal Arts” was proposed by the Ministry of Education in 2018, formally launched as a part of the "Four New" construction in 2019, and then the Declaration on the Construction of the New Liberal Arts was released in 2020, and the meaning of the construction has been gradually clarified - based on the new era and responding to new needs, promoting the integration of humanities and social sciences, leading the new development of humanities and social sciences, and serving the new goal of modernization.

Zhang Fugui (2021) stated that the combination or conversion of old and New Liberal Arts is not a $1+1=2$ model, but a $1+1=1$ model. Generally speaking, when transforming traditional liberal arts into New Liberal Arts, one must first analyze the attributes, similarities and differences between the two in order to achieve the effect of liberal arts innovation.

Wang Mingyu, & Zhang Tao (2019) pointed out that the New Liberal Arts is relative to the traditional liberal arts, which is based on the background of the new global scientific and technological revolution, the development of the new economy, and the entry of socialism with Chinese characteristics into the new era, breaks through the traditional thinking mode of the liberal arts, and takes inheritance and innovation, crossover and fusion, and synergy and sharing as the main ways to promote the interdisciplinary crossover and in-depth fusion, and to push forward the traditional liberal arts' We will promote the renewal and upgrading of traditional liberal arts, from discipline-oriented to demand-oriented, from professional division to cross-fertilization, and from adaptive service to supportive leadership.

Zhou, Xing, & Lu Xi (2022) pointed out that the construction of New Liberal Arts has become an important direction and driving force for the development of China's education sector. The main reason is that the construction of new liberal arts is based on the principle of "keeping the right and innovating", and the intersection of disciplines, and adapts to the direction of the disciplinary development of China's new centennial, which is much stronger and broader.

Peng Fengjiao, & Zhang Weiliang (2022) explained that the construction of New Liberal Arts has its unique "four new" connotations, i.e., it has a new pattern, a new concept, a new orientation, and a new method. Its contemporary value is embodied in the implementation of the fundamental task of establishing moral education and cultivating new people of the times; crossing the ideological barriers and cultivating applied and complex liberal arts talents; improving the competitiveness of talents and serving the long-term development of the country; and firming up the cultural self-confidence and enhancing the soft power of Chinese culture.

In summary, New Liberal Arts is an innovative concept and mode of liberal arts education, which emphasizes on value leadership and aims to cultivate talents with comprehensive literacy, interdisciplinary ability and innovative thinking by observing and innovating and intersecting disciplines, in order to adapt to the needs of the new global scientific and technological revolution, the development of the new economy, and the entry of socialism with Chinese characteristics into a new era.

2. Innovative Strategies for Teaching Art Majors in Colleges and Universities Based on New Liberal Arts in China

The construction of New Liberal Arts is an important path for the innovative development of art disciplines. For the discipline category of art, the adjustment of the new version of the subject catalog in 2022 most intuitively reflects the dual-driven characteristics of the New Liberal Arts, which not only reflects the needs of theoretical systems and discourse construction, but also reflects the needs of social development for the cultivation of interdisciplinary talents. In the new version of the catalog, the first is to strengthen support for disciplines and majors that promote the excellent traditional Chinese culture. According to the characteristics of artistic talent training, the new version of the catalog focuses on adjusting and optimizing the

setting of lower-level disciplines and professional degree categories in the art category. Based on the original first-level discipline of art theory, a first-level discipline of art is set up, including art. It covers the history, theory and critical research of academic theory and related specialized arts, and has six doctoral degree categories including music, dance, drama and film and television, opera and folk art, art and calligraphy, and design. The second is to add the "interdisciplinary" category, and include design (which can teach degrees in engineering and art), which was originally an art category, into this category. As one of the eight subject categories of the New Liberal Arts, the discipline of art is facing the urgent challenge of systematic renewal.

New Liberal Arts is an attempt to build a liberal arts system with new leadership based on respecting the existing liberal arts, which is to make the disciplinary system, professional settings, especially the training of talents to adapt to the requirements of the new era, and to stimulate the development of new concepts. (Zhou Xing, & Chen Xi, 2022)

(1) Optimizing the structure of the teaching force

Firstly, introduce practice-oriented talents. According to the characteristics and needs of the discipline, when introducing new teachers, we should consider the diversified professional art management characteristics, introduce industry experts and excellent teachers with rich practical experience and teaching experience to improve the overall quality of the teaching team. Enhance the practical ability and applicability of the teaching team through the introduction of practice-oriented talents. From the practical point of view, relax the academic requirements as appropriate, and focus on assessing their practical program management experience, industry background and industry connections, practical case study experience, experience in designing and implementing arts management programs, experience in designing and implementing arts management programs, and so on. Secondly, to cultivate the practical application ability of existing art major teachers. The cultivation of applied teachers in art majors requires teachers to accumulate practical experience. Therefore, training in practical teaching methods and skills, as well as exchange activities such as field trips, can be carried out to improve teachers' practical teaching ability. Teachers are encouraged to participate in more practical programs and practical activities so

that they can have a deeper understanding of the industry. By promoting the construction of practice bases, teachers and students are provided with more realistic practice environments and training resources. (Chen Jiehong, 2024)

(2) Promote the cross integration of disciplines in the core courses of majors.

One of the breakthrough points of the profound and all-round change of New Liberal Arts is the cross-fertilisation between disciplines, which is committed to breaking down the barriers between disciplines and majors, so as to achieve comprehensive cultivation of talents. (Li Junfeng, 2020) Social and economic development, scientific progress, the market demand for talents has become more diversified. Based on the construction of new liberal arts to promote the core curriculum of art majors in colleges and universities of cross-disciplinary integration, can effectively alleviate the contradiction between art professional training and social demand, so as to cultivate high-quality composite professionals for the society, the market, the industry, and the position more targeted. Colleges and universities should start from the characteristics of the art profession itself, focusing on ‘technology and art’, ‘art and business’ two major themes to promote the cross-fertilisation of professional core courses. From the perspective of the integration of ‘technology and art’, the application of various advanced technologies in the context of the new period of time has brought great changes to the art-related industries, and in this context, it is naturally very important to integrate advanced technologies into the curriculum system of art majors in colleges and universities in a way that is in keeping with the times, and it is necessary to co-ordinate the relationship between technology and art, and strengthen the technology support for artistic creation, art and commerce at the level of integration of disciplines. It is also important to coordinate the relationship between technology and art, and strengthen the technical support for artistic creation and the application of art-guided technology at the level of fusion of disciplines. Reasonably promote the cross-fertilisation of film and television professional courses emphasizing ‘technology and art’, and try to integrate the technology-based and art-based professional core courses, so as to realize the comprehensive cultivation of students' professional technology application ability and professional art creation ability. From the perspective of ‘art and business’, under the background of the

construction of new liberal arts, art majors in colleges and universities need to pay attention to the exploration of the commercial value of the art industry, and explore more possibilities of combining art and business organically in the context of art production, so as to cultivate more excellent talents in the industry who can meet the requirements of the society and follow the tide of the market.

(3) Deepening the penetration and integration of traditional culture in the professional development courses.

Under the background of new liberal arts construction, colleges and universities need to pay attention to the penetration and integration of traditional culture in the construction of film and television majors, so as to strengthen the professional characteristics and enhance the cultural self-confidence.

Cultural Confidence. Especially under the influence of various scientific and technological means and western cultural trends, China's cultural environment has become more and more complicated. Deepening the penetration and integration of traditional culture in art professional development courses can improve students' cultural literacy and enhance their cultural self-confidence, which will not only help students cope with the impact of all kinds of ideas, but also inject more vitality into the development of the art industry, and provide the art industry with more reserves of talents who attach importance to traditional culture and have cultural self-confidence, which in turn will help to present the beauty of traditional culture in art creation and show the new period of China's characteristics. Socialism and bring infinite possibilities for artistic creation to present the beauty of traditional culture and show the socialist culture with Chinese characteristics in the new period. (Zhou Xing, & Chen Xi, 2022) Colleges and universities need to conduct a comprehensive analysis of the film and television professional development course, dig deep into the traditional cultural elements in it, and extend and absorb more traditional culture-related content from the course itself. Deeply grasp the value of traditional culture, sort out the inheritance ideas, use quality resources, create an excellent teaching team, strengthen the penetration and integration of traditional culture in the professional development course in an all-round way, create a good traditional culture inheritance atmosphere, and cultivate a large number of high-quality art professionals.

(4) Innovative teaching tools and means based on digital technology

Under the background of the new period, the education and teaching of film and television in colleges and universities need to carry out comprehensive innovation, among which, the innovation of teaching tools and means is the key part.

Colleges and universities need to comprehensively strengthen the construction of information technology, actively promote the development process of educational information technology, try and apply a variety of new teaching tools, and constantly promote the innovation and optimization of teaching methods, so as to provide strong support for the improvement of the level of education and teaching of art majors. (Linqin, 2022) On the one hand, colleges and universities need to actively introduce new teaching tools and art production tools, apply advanced technology to innovate professional teaching in keeping with the times, create a digital learning experience for students, and ensure that students can keep abreast of the times and master the application of the latest tools in the industry, so that they can prevent students' professional core competencies from lagging behind the development of the times and the industry while improving the teaching effect; On the other hand, colleges and universities need to innovate and expand teaching methods, optimize traditional teaching methods with the help of digital technology, use new tools, apply new teaching methods, and rely on the innovation of teaching methods to promote the improvement of art education teaching level. Colleges and universities should pay special attention to the construction of resource base and teaching platform, deepen the application of big data, artificial intelligence, VR technology, AR technology and so on in professional teaching, and realize the effective change of professional teaching based on the Internet resources and cloud teaching platform. (Zhang Ran, 2024)

(5) Comprehensively optimize the professional practice teaching system

Strengthening practice teaching is the focus of film and television professional construction in colleges and universities under the background of new liberal arts, which can effectively strengthen the docking of art professional talent training and the demand of the society, market, industry, and positions, and then cultivate more excellent talents with good practical ability and comprehensive literacy. Colleges and universities need to optimize the professional practice teaching system, pay attention to the cultivation of students' innovation ability and

comprehensive coordination ability, actively use the case teaching method, program teaching method, on-site research and practical teaching, online teaching and virtual experiments and other teaching methods with strong practicality, and strengthen the construction of dual-teacher teaching team, (Chen Jiehong, 2024) inviting practitioners of the art industry to schools to participate in the design and teaching of the professional curriculum, to form the basic skills, professional skills and professionalism, and to develop the professionalism of students. teaching work, forming a practical teaching curriculum system combining basic skills, professional skills and comprehensive skills, deepening school-enterprise cooperation, perfecting the mechanism of combining engineering and learning, providing students with more practical opportunities and enhancing the practicality of professional teaching. (Lin Xiaojie, & Pan Zhao, 2023) In particular, it is necessary to highlight the spontaneity and autonomy of students in practice, with the help of the Internet platform as well as the resource advantages of the school, to encourage and guide students to find professional practice opportunities on their own initiative, so that students can strengthen their practice by means of programs, practical training, internships, etc., to enhance the ability of applying professional knowledge and skills, and to accumulate industrial experience. (Zhang Ran, 2024)

(6) Strengthening Value Leadership Based on Curriculum Civics Construction

Under the background of the new liberal arts, colleges and universities need to pay attention to the teaching of course ideology and politics in the process of actively promoting the teaching innovation of art majors, strengthen the value leadership based on the construction of course ideology and politics, and strengthen the cultivation of students from the dimensions of ideological cognition, political beliefs, values, and moral qualities. On the one hand, actively explore the professional course itself of the elements of the ideology and politics, combined with real cases to strengthen the course of the ideology and politics teaching; (Ma Ningyu, & Yan Jia, 2023) on the other hand, pay attention to the innovation and change of the course teaching mode, change the traditional teacher-student relationship, based on the film and television production mode to build the corresponding mode of cooperation

between teachers and students, so that students can form a sound personality in a harmonious and good environment.

In summary, Since the issuance of the “New Liberal Arts Construction Declaration”, new situations and changes in all aspects have shown an accelerating evolution, especially the development of a new wave of science and technology and industrial transformation. There has been an increasingly strong demand for the integration of science and education, the integration of industry and education, and the integration of art and science. These new changes constitute the new context in which we discuss the construction of New Liberal Arts disciplines in art today.

3. Ningxia Hui Autonomous Region Higher Education

3.1 Introduction to Ningxia Hui Autonomous Region

Ningxia Hui Autonomous Region, abbreviated as "Ning", is a provincial-level administrative region of the People's Republic of China, with Yinchuan as its capital, and is one of the five major ethnic minority autonomous regions of China; Ningxia Hui Autonomous Region is situated in the middle and upper reaches of the Yellow River in the northwestern part of China, between latitude 35°14'-39°23' north and longitude 104°17'-107°39' east. The total area of Ningxia Hui Autonomous Region is 66,400 square kilometers. The Ningxia Hui Autonomous Region has five prefectural-level cities under its jurisdiction, with a total of nine municipal districts, two county-level cities and 11 counties.

Ningxia is one of the birthplaces of Chinese civilization. It is located on the "Silk Road" and has historically been an important channel for transportation and trade between the East and the West. Ningxia is an important part of China's implementation of the "Belt and Road" initiative. Ningxia is located at the domestic hub of the New Eurasian Continental Bridge and is the most convenient air transportation hub for North China and Northeast China to the Middle East and Central Asia (Chen Yanzheng, 2019).

3.2 Status of Higher Education in Ningxia Hui Autonomous Region

(1) Ningxia is relatively backward in higher education in China.

With the implementation of the "Revitalization Plan for Higher Education in Central and Western China (2012-2020)", especially the advancement of the basic capacity building program of colleges and universities in central and western

China, Ningxia's higher education development has made great progress. Whether it is the scale of students, professional categories, teaching conditions, or hardware facilities, there have been great improvements. Ningxia is the first province in the western region to take the lead in entering the stage of universal higher education. (Zhang Zheng, & Bai Rushuang, 2021) However, compared with higher education in the eastern region, Ningxia's current higher education resources are far from meeting the requirements of social development. (Ma Qing, & Wang Chunxiu, 2016) Low school funding, the number of high-level colleges and universities in Ningxia is very small, there is not a representative of the high level of '985' universities, only Ningxia University, a '211' university and 'double first-class' university, and weak faculty have seriously restricted the competitiveness of colleges and universities in ethnic minority areas in the higher education market. (Liu Qin, & Gao Zhong, 2022) Among all provinces in China, Ningxia's educational location system is in a poor state, with significant dissipative structural characteristics, and there is still a long way to go to optimize and regulate the educational location status. (Pan Yujun, 2024)

(2) The distribution of higher education resources in Ningxia is extremely uneven.

There are a total of 20 general institutions of higher education in the region, including 8 undergraduate colleges and universities (including 2 independent colleges and universities), 12 institutions of higher vocational education (specialty), and 1 adult college and university. There are 6 undergraduate colleges and universities with art-related majors, including Ningxia University, North Minzu University, Ningxia Normal University, Ningxia Institute of Science and Technology, Yinchuan College of Science and Technology, Yinchuan College of Emerge. The distribution of higher education resources in Ningxia Hui Autonomous Region is extremely uneven. From the point of view of the number of higher education institutions in five prefectural-level cities in Ningxia, there are 16 higher education institutions in Yinchuan City, there are two higher education institutions in Shizuishan City, namely Ningxia Institute of Science and Technology, Shizuishan Institute of Industry and Trade College, and there is only one higher education institution in Guyuan and Wuzhong Cities, namely, Ningxia Normal University, Ningxia Institute of Nationalities Vocational and Technical College, and there is not even one higher

education institution in Zhongwei City. Except for Ningxia University, Ningxia Medical University, North Minzu University, Yinchuan College of Science and Technology, Xinhua College of Ningxia University and Yinchuan College of Energy, all other colleges and universities in Yinchuan are mainly vocational and technical colleges, and the number of undergraduate level colleges and universities is relatively small.

(3) Major Layout of Undergraduate Colleges and Universities in Ningxia

Compared with the Catalogue of Undergraduate Majors in General Colleges and Universities, undergraduate colleges and universities in Ningxia have a complete range of disciplines with wide coverage. Except for the lack of philosophy majors, other disciplines are complete, and the coverage rate of disciplines is as high as 92%.

The coverage rate of major categories is high and the layout is more reasonable. The coverage rate of major categories in undergraduate colleges and universities is 66%, but the full coverage of major categories in education, history and literature has also been achieved. Engineering has the largest increment in major categories, followed by art and then medicine. (Wan Minggang, & Liu Yafang, 2023) In terms of the structure of subject major categories, the largest increase in the proportion of subject structure is in the arts, followed by literature, and then engineering. Due to the small initial size of the majors in arts and its relatively large increment, the most significant increase in the structure ratio is observed. Although the increase in the types of majors in liberal arts is higher than that in science, the current structure of undergraduate majors in Ningxia colleges and universities is still dominated by science majors. (Zhang Zheng, & Bai Rushang, 2021).

The number of majors is relatively small, the scale of majors is small and the tendency of homogenization of majors is obvious. Ningxia colleges and universities have 254 professional sites, including 81 engineering sites, 36 management, 29 art, (Wan Minggang, & Liu Yafang) Ningxia colleges and universities undergraduate professional site scale of the larger increase. Whether it is from the scale of major distribution, or from its increase, the largest academic discipline is still engineering. Secondly, the disciplines with larger distribution of

majors are management and art. From the viewpoint of the structure of majors, the largest increase in the ratio of the structure of majors is in arts, followed by engineering and education. (Zhang Zheng, Bai Rushan) Due to the shortage of higher education resources, it is impossible to train talents that are in short supply and suitable for the economic development of the region. For example, digital media technology, information engineering, Internet of things engineering and other majors are in line with the development of new technological innovations and the employment rate of graduates in recent years, Ningxia local undergraduate colleges and universities have very few relevant majors. (Wan Minggang, & Liu Yafang)

Related Research

Ye Xiaoni (2024) studied the competence of college teachers in "dual-line hybrid teaching". This study aims to construct a competence model for teachers in "dual-line hybrid teaching", investigate the current status of teacher competence, and propose strategies to improve the competence of college teachers in "dual-line hybrid teaching". Through expert consultation and teacher interviews, a competence model of "dual-line hybrid teaching" with four dimensions and twenty competence factors was constructed, and a questionnaire survey was conducted on the current status of competence of college teachers in "dual-line hybrid teaching" based on the model. The results of the questionnaire analysis show that among the four first-level indicators, "knowledge", "personal traits" and "attitude" belong to the benchmark competence traits, among which "attitude" has the highest mean value of 4.37 points, "knowledge" 3.96, "personal traits" 3.85, and "skills" belong to the discriminative competence traits, which is 4.01. Among the twenty secondary indicators, the average value of "respecting students" belonging to the benchmark competency trait is the highest, which is 4.53, and the average value of "micro-video design" belonging to the discriminative competency trait is the lowest, which is 3.66. This shows that under the dual-line hybrid teaching mode, the benchmark competency of college teachers is good, while the discriminative competency still needs to be improved. In terms of knowledge, the score of "subject professional knowledge" in the secondary indicator is relatively high, which is 4.13, while the "educational technology knowledge" related to modern information technology is relatively low, which is only 3.86. In

terms of skills, "micro-video design" scored the lowest, which is only 3.66. The score of this part is low, indicating that the digital teaching operation skills of college teachers still need to be further improved. In terms of personal characteristics, "teaching reflection and innovation" scored the highest, which is 4 points, and the average recognition score of "dual-line hybrid teaching" is 3.71. It shows that college teachers have a relatively high sense of teaching innovation and can constantly think and ruminate in teaching practice activities. In terms of attitude, the average score of "student-centered" is relatively low, which is 4.21. This reflects that with the continuous updating and iteration of teaching reform and teaching concepts in colleges and universities, some college teachers are still unable to get rid of the shackles of traditional teaching. In the process of teaching implementation, they cannot take students as the main body of the teaching process and focus on students' learning rather than teaching content. Other main conclusions of this questionnaire survey include: 67.5% of the interviewed teachers believe that "dual-line hybrid" is an important and valuable teaching model, and have the motivation to achieve it to perfection; 53.75% of the interviewed teachers believe that they can play their own advantages in "dual-line hybrid" teaching, and gain self-affirmation and teaching achievement brought by the improvement of concepts and methods; another 60% of the interviewed teachers believe that they can creatively think about "dual-line hybrid" teaching problems, build a "dual-line hybrid" teaching environment, and conduct innovative exploration and application. The above data all show that most college teachers have some understanding of the "dual-line hybrid" teaching model, are more confident in its application value and prospects, are willing to update their concepts in teaching, actively accept the impact and changes brought by new technologies, and actively learn and try new teaching models.

Wang Qiang, & Lv Yang (2022) studied the competence-based appointment criteria and diversified evaluation mechanism for art and design "dual-teacher" teachers. The purposed of the research is to 1) analyze the recognition standards, appointment levels, and evaluation mechanisms of "dual-teacher" teachers of art and design; 2) based on the theory of competence and the theory of teachers' development stages, combined with the characteristics of art and design teachers, a teaching competence evaluation model driven by digital technical skills and practical

innovation quality is studied to guide the professional development of art and design teachers. The results of the research found that 1) in the context of industry-education integration, "dual-teacher" teachers are the quality requirements for art professional course teachers; 2) based on the theory of professional development stages of teachers and the characteristics of art and design teachers, they constructed a competence model for "dual-teacher" teachers. The model analyses the competence of art teachers from two dimensions: theoretical teaching ability and practical teaching ability. The theoretical teaching ability is divided into three levels: theoretical teaching qualification, theoretical knowledge teaching quality and teaching innovation quality, and the practical teaching ability is divided into three levels: practical guidance qualification, practical skill quality and practical innovation quality; 3) Corresponding to the two dimensions of theoretical teaching and practical teaching, "dual-teacher" art teachers are divided into three levels, namely, teachers with entry-level qualifications, general dual-teacher teachers, and high-level innovative dual-teacher teachers; 4) build professional knowledge and technical skills "teaching - updating" mechanism, and ultimately formed by the entry qualification dual teacher to general quality dual teacher to high quality dual teacher development path. The competence of art and design "dual-teacher" teachers should have good teacher ethics, and be able to complete the tasks of theoretical teaching and practical teaching.

Du Yihang, Chi Xuefeng, & Pei Yan (2020) studied the competence quality of digital media art teachers in colleges and universities. The purpose of the research to analyze the challenges brought by information technology to the teaching of art teachers in universities from the perspectives of changes in teaching space and teaching methods, and to study the composition of the competence qualities of art teachers in universities. The results of the research found that 1) the competence qualities of art teachers in colleges and universities include teacher ethics, teaching ability, knowledge reserve, information technology ability and non-technical skills. Non-Technical Skills (NTS) is an important part of teachers' competency quality, as an auxiliary of teaching ability, emphasizing the development of high-quality teaching activities on the basis of ensuring students' safety through effective communication, construction of situational awareness, decision-making at critical points in time and cognitive management; 2) Identify the key elements of teacher competency qualities

in digital media arts in the context of information technology teaching and learning; 3) exploring the dynamic mechanisms of competency development will help optimize the quality of teaching and learning by improving teachers' competencies.

Huang Jionghua (2012) studied the job competence factors of teachers specializing in art education in colleges and universities. The purpose of the research is to take art education teachers in universities as the research object, use a self-designed "Competency Survey Questionnaire for Art Education Teachers" for statistical analysis to explain the structure and importance ranking of the competency elements of art education teachers. Using art education teachers and art students as the survey sample, the five most important factors and the five least important factors were asked to be selected from 20 typical behavioral events of competence and ranked in order of their importance respectively. The results of the research found that 1) among all 20 basic competency factors, only a few are the most important and least important competencies for art education teachers, and the importance level of most competency factors is in the middle; 2) There is not much difference between the teachers of art education majors and the students of art majors in evaluating the importance of the factors, and both of them regard self-confidence, conceptual thinking and leading a team as the most important factors, and interpersonal understanding, the use of competence and the development of other people as the least important factors; 3) the teachers of art education majors of different titles assessed the most important factors varied considerably, with only self-confidence and conceptual thinking being recognized as the most important factors. The least important factors evaluated by art education teachers with different professional titles also have significant differences, with only organizational awareness and the development of others recognized as the least important factors.

Cuan Lihan (2023) studied the digital literacy of college teachers, the purpose of this study is to focus on the digital literacy of college teachers: framework building, dilemma research and practice path theme, explore the digital literacy of college teachers from multiple levels, aiming at exploring effective paths for the digital literacy of college teachers, and promote the digital literacy of college teachers to leap up. The results of the study show that: 1) the digital literacy of college teachers consists of basic digital competence, digital learning competence and digital teaching

competence. 2) The digital literacy of college teachers is low, although those responsible for a significant proportion of teaching have a more acute awareness of the significance of education informatization. Nevertheless, the acquisition of information knowledge remains a substantial challenge in the enhancement of digital literacy among college teachers. A significant proportion of these educators are only capable of performing rudimentary processing of teaching resources, and the utilization of digital intelligent technology remains limited, particularly in terms of its integration with teaching disciplines. 3) To address this issue, it is imperative to formulate countermeasures to enhance the digital literacy of college teachers from three distinct perspectives: individual teachers, national platform resources, and the digital literacy assessment system.

Niyazova, Gulzhan Zh. et al. (2022) studied Development of digital competence of school teachers. The purposed of the research was devoted to the problem of solving the problems of forming and improving the digital competence of teachers. To solve the problems of forming digital competence of school teachers, it is necessary to solve the following tasks:

Task 1. Scientific and methodological definition of the essence and content of the concepts “Digital literacy”, “Digital competence”, “Digital competence of teachers” and their components, creation of a structural and content model for the formation of digital competence of teachers.

Task 2. Creation and implementation of an information system for methodological support of teachers on the use of digital technologies in education.

Task 3. Development and implementation of software for determining the level of formation of digital competence of teachers.

Task 4. Organization and implementation of advanced training courses for the formation of digital competence of teachers.

Task 5. Implementation the set of scientific and methodological measures to promote digital education and increase the motivation of teachers to use digital technologies in education.

The results of the survey showed that in the Turkestan region, there is an urgent need to consider operational measures for the formation of digital competencies of teachers for the creation of digital educational content and the

implementation of digital educational technologies in education. It is also necessary to solve the following problems that arise in the process of digitalization of the education system and integration into the world educational space: low activity of teachers in the implementation of teaching methods based on digital technologies in education; low level of use of the educational potential of social networks and cloud services in the educational process; improving the level of methodological training of teachers on the formation of information security of students; increase the level of knowledge of teachers in the field of intellectual property and copyright, in the field of obtaining and using network resources, as well as network communication skills.

Suryawati Evi, et al., (2024) studied mentor, observe, support, take action (MOST): a model for continuing professional development of teacher leaders. The study aims to identify literacy competencies, self-efficacy, and Technological Pedagogical Knowledge (TPK) among teacher leaders (TL) as the foundation for developing a model of sustained professional development. The survey involved 153 respondents, TL at the junior high school level in Riau and Riau Islands. Instruments were used to measure literacy skills (environmental, numerical, digital) and TPK employed multiple-choice tests. The questions underwent item analysis, piloted with 30 respondents. A questionnaire measured self-efficacy, the role of TL, and the implementation of the Emancipated Curriculum. Descriptive data analysis determined demographic characteristics and the average competence of TL. Inferential analysis to identify relationships between variables used Structural Equation Modeling (SEM) with Lisrel 8.80 software. Research results reveal that the competence level of TL (literacy, TPK, and self-efficacy) ranges from moderate (60.60) to high (91.20). Based on SEM analysis, the developed model meets the criteria as a well-fitting model. Validation results show that all loading factors are > 0.5 , t statistics > 1.96 . This study recommends the development of a TL Professional Development model with the acronym MOST (mentor, observe, support, take action) as stages for their professional development to fulfill the mission of moving, acting, and driving the implementation of the Emancipated Curriculum in Indonesia.

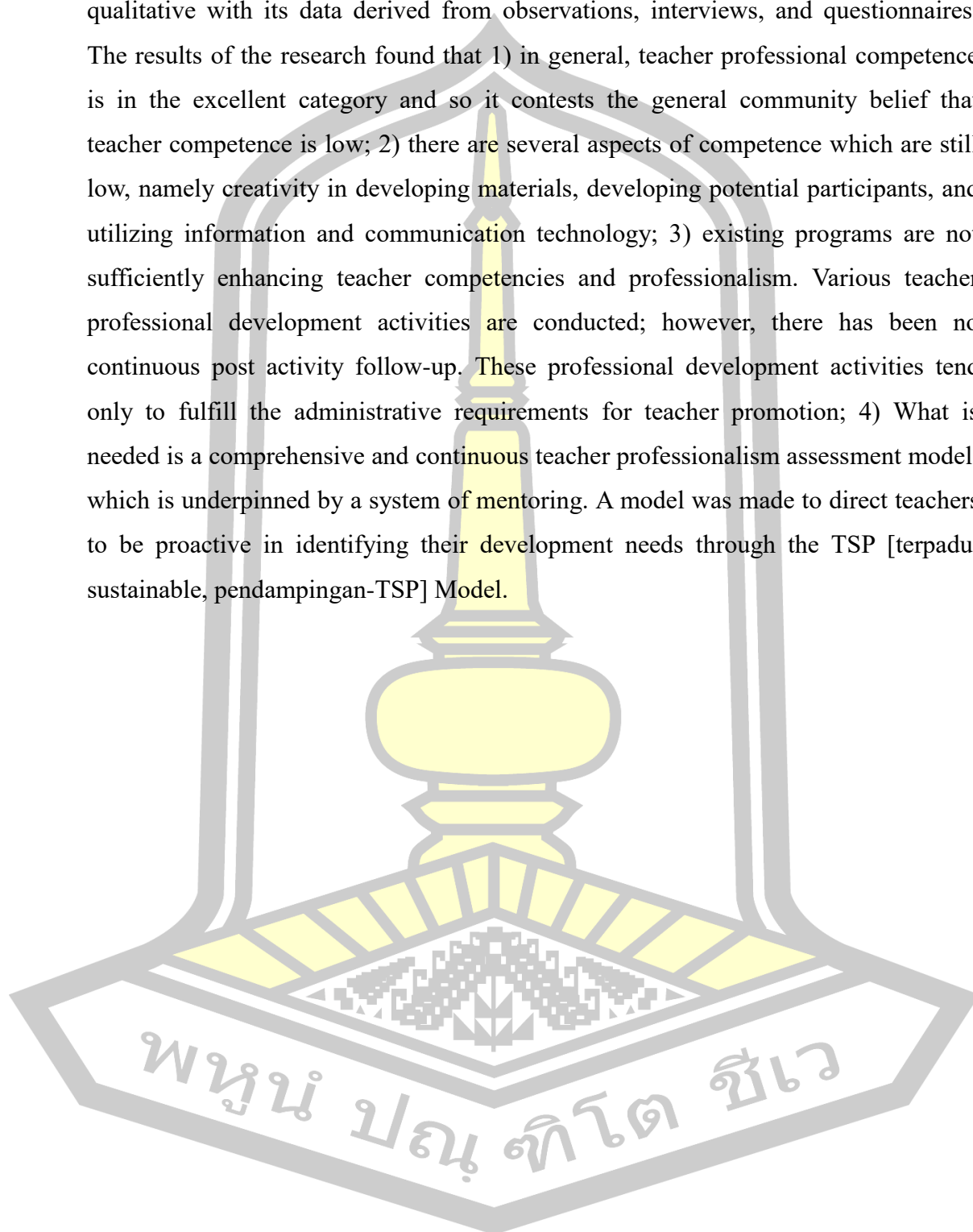
Siri. A., et al. (2020) Studied teacher competence and commitment weather improve teacher's professionalism. The purposed of the research to examine and

analyze the role of teacher competence and commitment in supporting teacher performance. The study was conducted on professional teachers in Madrasah schools in all regencies/cities in Bali which total of 906 teachers. The number of samples was determined based on the Slovin formula at an error rate of 5%, obtained 277 teachers distributed proportionally in 9 districts/cities. Data collection is done by direct interview based on a questionnaire that has been prepared. The collected data is then processed by the Smart PLS 3.0 program. The results of the research found that teacher competence and commitment was significantly positive effect on the performance of professional teachers. The teacher's commitment acts as a mediator of teacher competence and professional teacher performance. These results provide information on how to increase teacher performance. It is necessary to support the improvement of the competence and commitment of teachers.

Kozyr, A.V., et al. (2021) studied the Competence Approach as a Methodological Tool for Shaping the Professional Competence of Future Music Teachers. The purposed of the research to study the role, importance and features of the competence approach as strong trend in the development of art education in the context of global integration and globalization trends. The results of the research found that 1) the key properties of professional competence of a future art teacher are characterized; the significance of the system of thinking actions and operations as the basic foundation for its development is established; 2) The specificity of methodological support for the teaching of art disciplines, aimed at using the maximum number of mental operations, is described. The conducted research allowed generalizing the definition of professional competency of future art teachers as an integrated qualitative characteristic of an art teacher, which is a complex of knowledge, abilities and skills acquired as a result of professional art training, self-study, own teaching and performing experience in the areas of teaching art disciplines, art history, pedagogy, psychology, etc., and pedagogical and artistic communication, the ability to operate freely with certain knowledge and skills and to apply them effectively in the course of practical professional activities.

Aris A S, Haqq A A, & Winarso W (2022) studied a Skill Application Model to Improve Teacher Competence and Professionalism. The purposed of the research to explain the importance of an effective skill application model coupled with a

comprehensive approach to raise the level of teacher competence. This study is qualitative with its data derived from observations, interviews, and questionnaires. The results of the research found that 1) in general, teacher professional competence is in the excellent category and so it contests the general community belief that teacher competence is low; 2) there are several aspects of competence which are still low, namely creativity in developing materials, developing potential participants, and utilizing information and communication technology; 3) existing programs are not sufficiently enhancing teacher competencies and professionalism. Various teacher professional development activities are conducted; however, there has been no continuous post activity follow-up. These professional development activities tend only to fulfill the administrative requirements for teacher promotion; 4) What is needed is a comprehensive and continuous teacher professionalism assessment model, which is underpinned by a system of mentoring. A model was made to direct teachers to be proactive in identifying their development needs through the TSP [terpadu, sustainable, pendampingan-TSP] Model.



CHAPTER III

RESEARCH METHODOLOGY

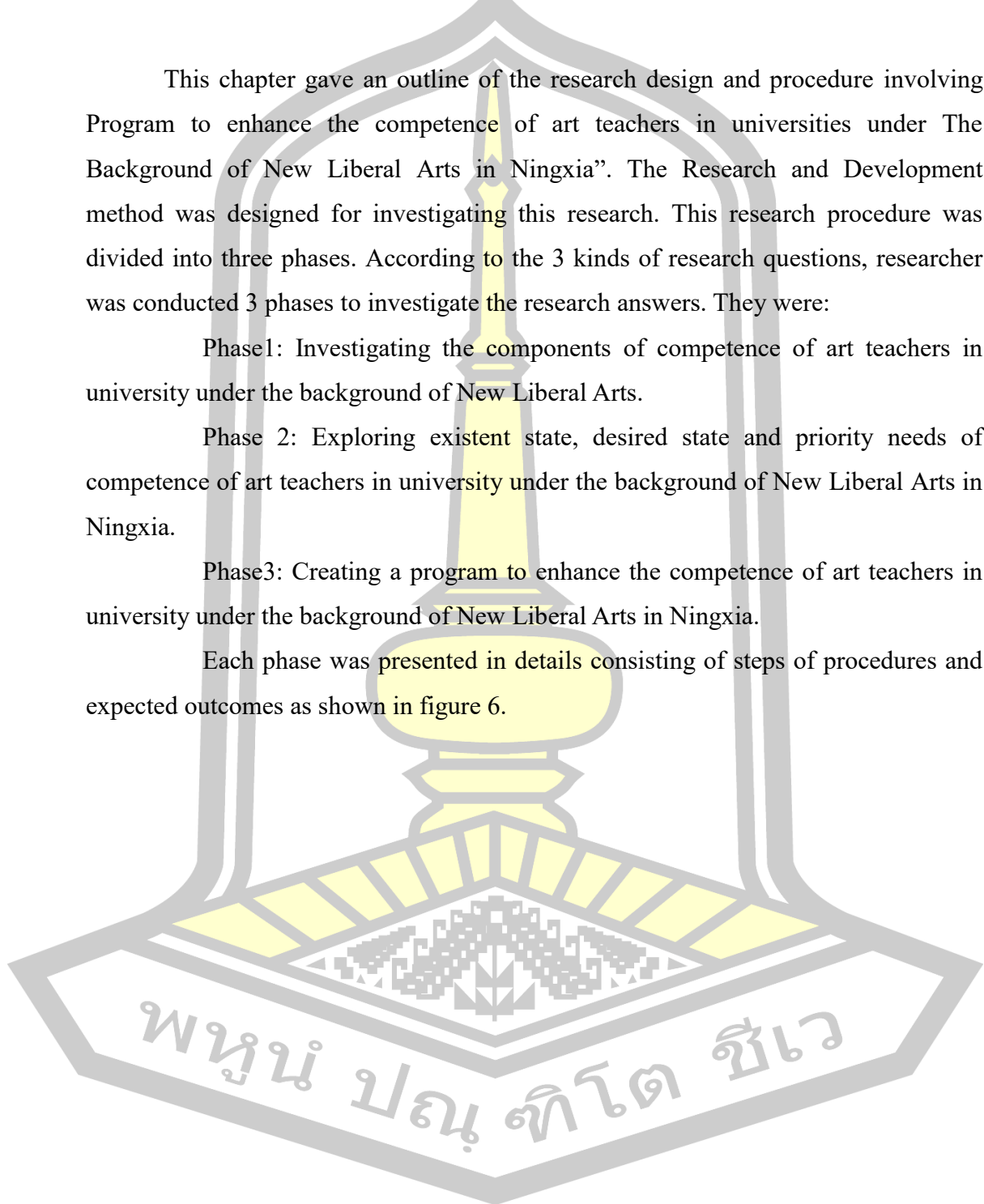
This chapter gave an outline of the research design and procedure involving Program to enhance the competence of art teachers in universities under The Background of New Liberal Arts in Ningxia”. The Research and Development method was designed for investigating this research. This research procedure was divided into three phases. According to the 3 kinds of research questions, researcher was conducted 3 phases to investigate the research answers. They were:

Phase1: Investigating the components of competence of art teachers in university under the background of New Liberal Arts.

Phase 2: Exploring existent state, desired state and priority needs of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Phase3: Creating a program to enhance the competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Each phase was presented in details consisting of steps of procedures and expected outcomes as shown in figure 6.



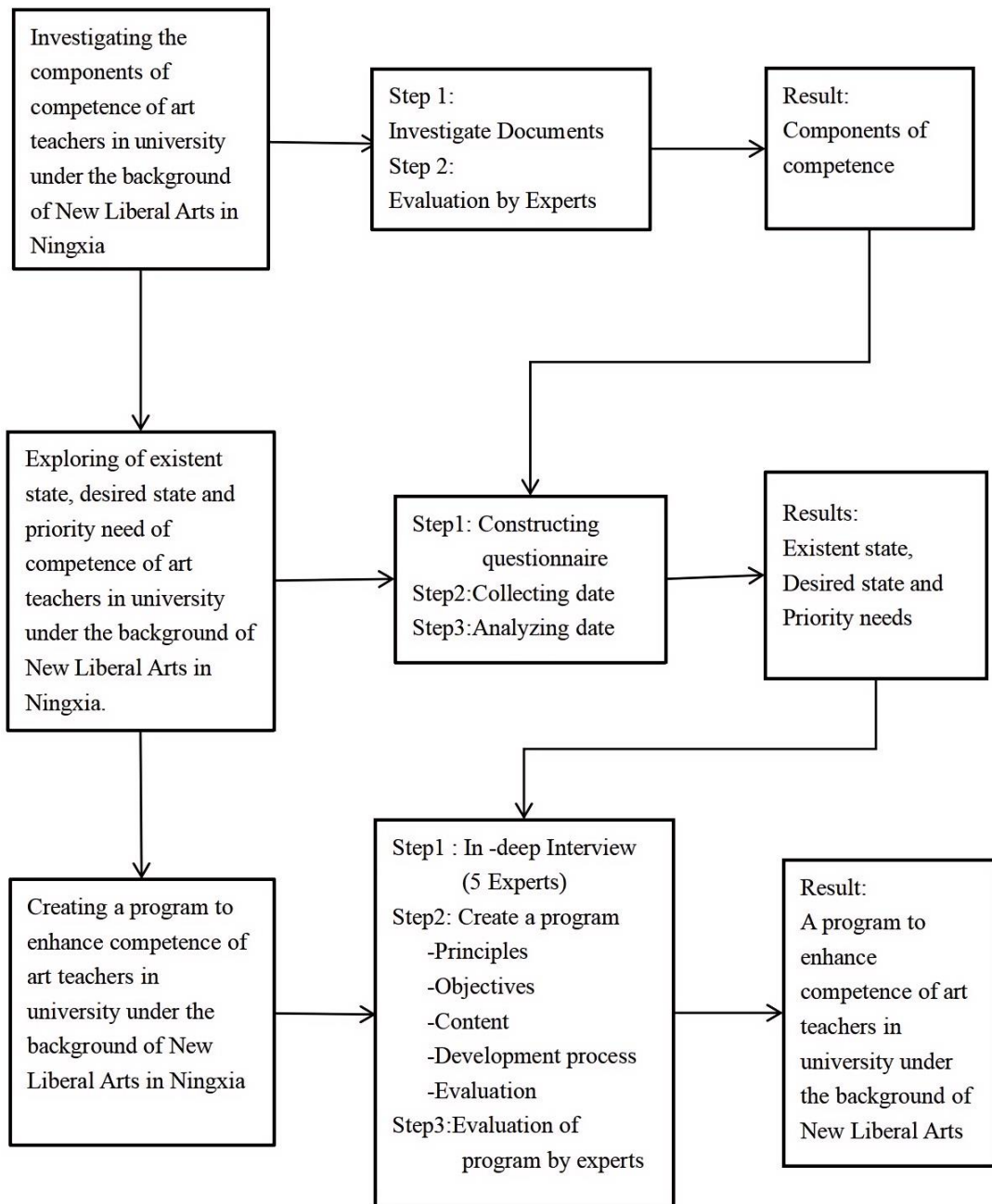


Figure 6 Develop the process of research on enhance the competence of art teachers in university under the background of New Liberal Arts in Ningxia

Phase 1 Investigating the components of competence of art teachers in university under the background of New Liberal Arts.

Step 1 Study components of competence of art teachers in university

1. Data sources

The researcher will collect literature related to the competencies of art teachers, including books, textbooks, documents, and research articles. Additionally, foreign research articles and books will be included to ensure comprehensive coverage of international research in the field. These materials will be sourced from libraries, the internet, and online databases. The researcher will then categorize, evaluate, and critically analyze these sources to ensure they are relevant, credible, and of high quality. By synthesizing the findings, the researcher will form a comprehensive understanding of the components of competence of art teachers.

2. Research instrument

The researcher will organise and analyse the data using record forms for printed documents or Information record form. The collected literature will be categorised and critically evaluated and digital tools will be used to streamline the data collection and analysis process.

3. Data Collection

The researcher collection and categorize the content according to the variables studied.

4. Data Manipulation and Analysis

The summarizes, analyzes, and synthesizes using content analysis techniques and uses the analytical data to classify items into data analysis.

Step 2 Evaluating the suitability of the components of competence of art teachers in university.

1. Expert Criteria for selecting qualified experts are as follows:

1.1 Education: Expertise in arts administration, arts research, and arts creation, with at least a master's degree.

1.2 Experience: Extensive experience in teaching and leading arts education in colleges and universities.

1.3 Job position: Teaching and counselling of postgraduate students in art education in higher education.

Experts include:

(1) Prof. Dr. Su Guanyuan, Master's Supervisor, Dean of the College of Design and Art, North Minzu University.

(2) Prof. Dr. Wang Shengze, Doctoral Supervisor, Dean of the College of Fine Arts, Ningxia University.

(3) Prof. Dr. He Jiao, Master's Supervisor, Vice Dean of the College of Music and Dance, North Minzu University.

(4) Prof. Feng Chao, Master Supervisor, Dean of the College of Fine Arts, Ningxia Normal University.

(5) Assoc. Prof. Dr. Tao Li, Master's Supervisor, Dean of College of Literature and Art, Ningxia University of Science and Technology.

2. Research instrument**2.1 Constructed research instrument**

The researcher has proceeded to create and find the quality of research instrument as follows.

2.1.1 Characteristics of the research instrument is a suitability assessment of components, divided into 2 parts.

Part 1: Checklist questionnaire, asking about the status of the experts.

Part 2: Assessment of the suitability of the components of competence of art teachers in university under the background of New Liberal Arts in Ningxia

Level 5 refers to suitability as highest level

Level 4 refers to suitability as high level

Level 3 refers to suitability as medium level

Level 2 refers to suitability as low level

Level 1 refers to suitability as lowest level

2.2 Find out Quality of Research Instrument

2.2.1 Study details of the components of competence of art teachers in university.

2.2.2 Define the components of competence of art teachers in university.

2.2.3 Create evaluation form of the components of competence of art teachers in university

2.2.4 Take it to the advisor to check for accuracy and improve according to recommendations.

2.2.5 Prepare a complete suitability evaluation form.

3. Data Collection

The researcher proceeded with data collection with the following steps:

3.1 The researcher asked for the official documents of the Faculty of Education. Mahasarakham University to experts to request assistance in collecting data.

3.2 Contacted and coordinated with experts to assess the appropriateness of the elements and indicators of competence of art teachers in university.

3.3 Carried out data collection.

4. Data Manipulation and Analysis

4.1 Organizing data. The researcher proceeds as follows:

4.1.1 Verify accuracy completeness of the evaluation form.

4.1.2 Code, score and record data on the computer.

4.2 Data analysis

Form for evaluating the suitability of methods for strengthening teacher leaders Use mean analysis and standard deviation Using the criteria for interpreting the mean (Srisa-ard, B. 2010)

4.51 - 5.00 refers to suitability as highest level

3.51 - 4.50 refers to suitability as high level

2.51 - 3.50 refers to suitability as medium level

1.51 - 2.50 refers to suitability as low level

1.00 - 1.50 refers to suitability as lowest level

Phase 2 Exploring existent state, desired state and priority needs of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

To explore existent state, desired state and priority needs of competence of art teachers in university under the background of New Liberal Arts in Ningxia, the researcher conducted a survey research method as the followings:

1. Population and sample

1.1 The population used in this research consists of administrators and art teachers in Ningxia colleges and universities, including Ningxia University, North Minzu University, Ningxia Normal University, Ningxia Institute of Science and Technology, Yinchuan College of Science and Technology, Yinchuan College of Energy, art teacher and administrators number: 37 people, art teachers number: 401 people, total: 438 people.

1.2 The sample group used in this research included administrators and art teachers in Ningxia colleges and universities, including Ningxia University, North Minzu University, Ningxia Normal University, Ningxia Institute of Science and Technology, Yinchuan College of Science and Technology, Yinchuan College of Energy, art teacher and administrators number: 20 people, art teachers number: 185 people, total: 205 people. The result of sample size is shown in the table 6.

Table 6 Population and Sample

Kind of Population	Population	Sample
Art teachers	401	185
Art teachers and administrators	37	20
Total	438	205

The researcher performed the following steps.

(1) Determine the sample size using the table of Krejcie and Morgan (1970). The total number of art teachers in the six Ningxia universities mentioned above is 401, and the total number of art teachers and administrators in related universities is 37, with a total population is 438. The sample sizes obtained is 185 art teachers and 20 art teachers and administrators, with a total sample size of 205 people.

(2) Stratified Random Sampling classified according to Job attribute. Art teachers include teachers in the fields of fine art, design, film and television art, music, and dance; Art teachers and administrators refer to teachers who are engaged in both art teaching and teaching management responsibilities, including deans, vice deans, heads of teaching and research departments.

(3) Calculate the number of samples according to the proportion of the population in each stratum. Then Simple Random Sampling has details as shown in the table 6.

2. Research instrument

2.1 Constructed research instrument

Constructed research instrument by questionnaire, divided into sections, which are:

Part 1 Checklist questionnaire asked about, for example, the status of the respondents in terms of teaching profession, which was a forced choice.

Part 2 Rating scale questionnaire asked about the existent state and desired state. By classifying the questions as a 5-level estimation scale of the Likert Scale, the score value is 5 levels as follows:

5 refers to existent state and desired state as highest level

4 refers to existent state and desired state as high level

3 refers to existent state and desired state as medium level

2 refers to existent state and desired state as low level

1 refers to existent state and desired state as lowest level

2.2 Find out quality of research instrument

2.2.1 Study how to construct an estimation scale questionnaire.

2.2.2 Created questionnaire about competence of art teachers in universities in the context of the New Liberal Arts from the results of the study in Phase 1 served as a framework for constructing the questionnaire.

2.2.3 Take it to the thesis advisor to check its accuracy and make improvements according to their advice.

2.2.4 Checking the quality of the questionnaire by checking content validity, the researcher brought the draft questionnaire created by the researcher and has been considered by the thesis control committee presented to experts in research

or evaluation and content to check the validity of the content, suitability, and clarity of the questions.

In order to verify and check the validity, found the content validity through Index of Item-Objective Congruence (IOC) in order to improve the relevant of the questionnaire items with the term definitions defined in the chapter I. The accuracy of the content validity of questionnaires were valid if the values of IOC criteria that greater than or equal 0.7. Then, the questionnaire was revised based on the experts' suggestions and recommendations, and was returned to the adviser to adjust it before trying it out. The statistical result was $IOC=1.00$, refers to experts were agreed that the question responds to the content.

Experts in examining research instruments and considering giving opinions on the consistency of the questionnaire using the IOC (Index of Congruence) technique, 5 experts consist of:

- (1) Prof. Lei Xingming. Doctoral tutor, Music college of Ningxia University.
- (2) Prof. Liu Fuquan, Master's Degree Tutor, Art college of Hebei University.
- (3) Prof. Zuo Liguang, Master's Degree Tutor, Former Dean of Collage of Design and Art, North Minzu University.
- (4) Prof. Dr. Ma Dongya, Master's Degree Tutor, Vice Dean of the Collage of Music, Ningxia University.
- (5) Prof. Dr. Zhu Xuhui, Master's Degree Tutor, Tiangong University.

2.2.5 The researcher administered the draft questionnaire, which had been validated and approved by the thesis control committee, to a sample of 70 participants for a pilot study using factor analysis. To assess the suitability of the data for factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was employed. The researcher applied a validity criterion for the overall questionnaire of a KMO value equal to or greater than 0.70. The analysis yielded a KMO value of 0.878 for the examination of the existent state and 0.724 for the examination of the desired state.

2.2.6 The researcher used the questionnaire with discriminatory power to find the reliability of the whole questionnaire according to Conbrach's alpha

coefficient method, and the researcher used the confidence criteria for the whole version equal to or greater than .70. The Cronbach Alpha coefficients for each of the components of the questionnaire art teachers competence existent state in this study exceeded 0.7, and the Cronbach's Alpha coefficients of knowledge literacy, Didactic ability, Digital literacy, Uphold fundamental principles and break new ground and Moral education ability are 0.920, 0.949, 0.943, 0.922 and 0.910 respectively. The Cronbach Alpha coefficients for each of the components of the questionnaire art teachers competence desired state in this study exceeded 0.7, and the Cronbach's Alpha coefficients of knowledge literacy, Didactic ability, Digital literacy, Uphold fundamental principles and break new ground and Moral education ability are 0.940, 0.961, 0.967, 0.938 and 0.927 respectively.

2.2.7 Prepare a complete questionnaire. and used to collect data with samples.

3. Data Collection

3.1 Proceed to request an official letter to collect data from the Faculty of Education.

3.2 Contact and coordinate for assistance in collecting data with samples.

3.3 Data Collection (describe methods such as manual/postal or electronic collection methods).

4. Data Manipulation and Analysis

4.1 Data manipulation and analysis, the researcher proceeds as follows.

4.1.1 Validate exhaustive questionnaire.

4.1.2 Assign codes, give points, and record data on the computer.

4.2 Analysis of questionnaire data.

4.2.1 Part 1 Status of respondents using frequency and percentage Analysis.

4.2.2 Part 2 Existent state and desirable condition use mean analysis and standard deviation (Srisa-ard, B. 2010)

4.51 - 5.00 refers to existent/desired state as highest level.

3.51 - 4.50 refers to existent/desired state as high level.

2.51 - 3.50 refers to existent/desired state as medium level.

1.51 - 2.50 refers to existent/desired state as low.

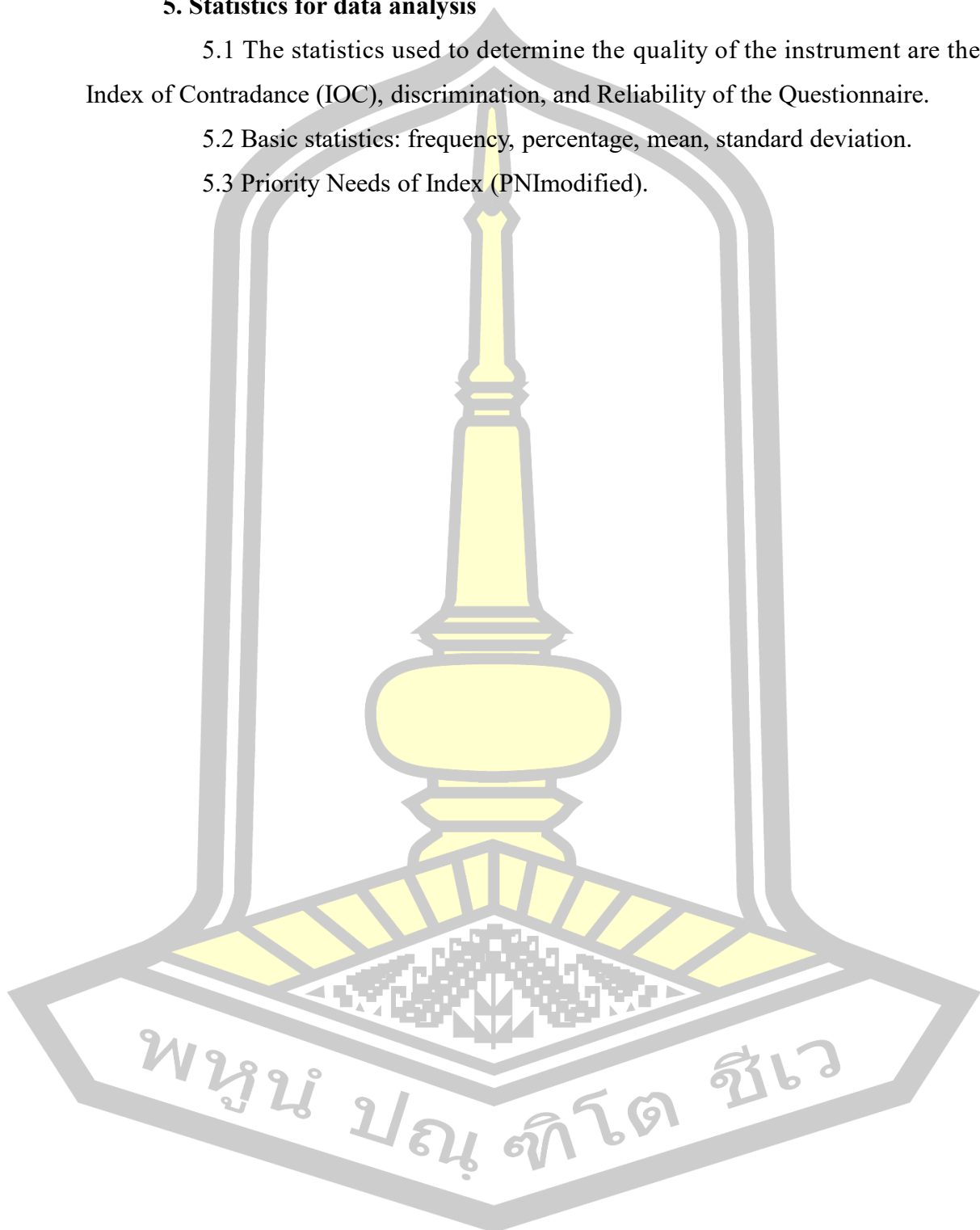
1.00 - 1.50 refers to existent/desired state as lowest level.

5. Statistics for data analysis

5.1 The statistics used to determine the quality of the instrument are the Index of Contradance (IOC), discrimination, and Reliability of the Questionnaire.

5.2 Basic statistics: frequency, percentage, mean, standard deviation.

5.3 Priority Needs of Index (PNImodified).



Phase 3 Creating a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Step 1 The interview: the researcher proceeded as the followings:

1. Expert. The researcher set criteria for selecting qualified experts for interview as follows:

1.1 Education: expertise in the field of education and training educational management, educational research or educational psychology, with at least a doctoral degree.

1.2 Experience: experience in teaching and educational leadership.

1.3 Job position: teaching and advising postgraduate students in the above fields.

Experts include:

(1) Prof. Dr. Wang Anquan, served as Dean of the College of Education and Vice Dean of the College of Teacher Education at Ningxia Normal University, Director of the Pedagogical Branch of the Chinese Society of Education, Chief expert of the Education Think Tank of the Ningxia Hui Autonomous Region Government.

(2) Prof. Dr. Hao Wenbin, Dean of the Faculty of Education at Shaanxi Normal University, Director of the Postdoctoral Mobile Station of Education, and Director of the Northwest Basic Education and Teacher Education Research Centre.

(3) Prof. Dr. Li Yanping, Doctoral Supervisor, College of Education, Shaanxi Normal University.

(4) Prof. Dr. Ding Fengqin, Doctoral Supervisor, College of Education, Ningxia University.

(5) Prof. Dr. Wang Xihong, Master's Degree Supervisor, Dean of the Faculty of Educational Sciences, Ningxia Normal University.

2. Research instrument

2.1 Constructed research instrument

Constructed research instrument by data collection was an interview form has the following components:

Part 1 Information of experts: information including 1) education level 2) job position 3) work experience.

Part 2 Opinions on the issues: The interview survey is mainly for the comprehensive development competence of art teachers in issues about principles, methods, and number of hours.

2.2 Find out quality of research instrument

The researcher has proceeded to create and find the quality of the research instrument as follows:

- (1) Study the concepts, theories, and related research: develop program to enhance art teachers competence in university under background of New Liberal Arts in Ningxia.
- (2) Create an interview form.
- (3) Take the interview form to the advisor to check the correctness of the interview form, and idioms, and make improvements as recommended.
- (4) Improve the interview form according to the advice to be published in the complete form.

3. Data Collection

The researcher collects data. The details are as follows.

- 3.1 Prepare a letter asking for cooperation from the Faculty of Education to experts.
- 3.2 Submit a letter requesting a cooperation thesis outline and a structured interview form to the experts to ask for assistance in giving an interview.
- 3.3 Coordinate with experts to request an interview date and time.
- 3.4 Interview on the appointed date and time.

4. Data Manipulation and Analysis

- 4.1 Collect interview data. organize information group content.
- 4.2 Data were analyzed by qualitative data analysis techniques. Content Analysis.

Step 2 Create a program

In drafting a program to enhance to competence of art teachers in university under the background of New Liberal Arts in Ningxia. The researcher proceeds as follows:

The researcher explains the method of creating program by studying principles, concepts, theories, and studying necessary needs. Study good practices and

create the program to enhance competence of art teachers in university under the background of New Liberal arts in Ningxia.

1. The researcher took the results of the study from Phase 1, the results of the study of components, indicators, and guidelines for developing enhance to competence of art teachers in university under the background of New Liberal arts in Ningxia according to the research concept. The draft enhances to competence of art teachers in university under the background of New Liberal arts in Ningxia. program consists of 5 components: 1) Principles, 2) Objectives, 3) Content, 4) Development process, and 5) Evaluation.

2. The researcher leads a program to enhance to competence of art teachers in university under the background of New Liberal arts in Ningxia. Propose to the advisor for consideration. and improve according to the advice and corrections according to the advisor.

3. The researcher will present the program to experts.

Step 3 Evaluation the program

1. Expert. Criteria for selecting qualified experts are as follows:

1.1 Education: expertise in the field of education and training educational management, educational research or educational psychology, with at least a doctoral degree.

1.2 Experience: experience in teaching and educational leadership.

1.3 Job position: teaching and advising postgraduate students in the above fields.

Experts include:

(1) Prof. Dr. Hu Baoli, Dean of the College of Education at Hebei University, Vice President and Secretary General of Hebei Higher Education Society.

(2) Prof. Dr. Wang Anquan, served as Dean of the College of Education and Vice Dean of the College of Teacher Education at Ningxia Normal University, Director of the Pedagogical Branch of the Chinese Society of Education, Chief expert of the Education Think Tank of the Ningxia Hui Autonomous Region Government.

(3) Prof. Dr. Li Yanping, Doctoral Supervisor, College of Education, Shaanxi Normal University.

(4) Prof. Dr. Hao Zhenjun, Master's Degree Supervisor, Dean of Education Department, College of Teacher Education, Ningxia University.

(5) Prof. Dr. Zen Fenglan. Vice Dean of the Faculty of Education, Ningxia University.

2. Research instrument

2.1 Constructed research instrument

Constructed research instrument by studying documents. Relevant research of program components Then determine the key points to be assessed from the information obtained from the study. then used to create questions to cover the issue.

2.2 Find out quality of research instrument.

2.2.1 Study the details of the components of the program.

2.2.2 Determine the key points to be assessed from the data obtained from the study used to write questions to cover all issues.

2.2.3 Advisor the correctness of the idioms.

2.2.4 Experts Verify Content Validity of Question Clarity.

3. Data Collection

The researcher coordinated with experts to evaluation the suitability and feasibility of the program.

Researcher required the approval letter from the Faculty of Education, Mahasarakham University before starting the data distribution process. In order to make data collection process effectively and objectively, the request letter was attached with the evaluation form and sent to respondents. The data was distributed by hard copy in which given directly to the experts and also sent evaluation form to the experts through their email. The researcher will receive the data through email or collect complete papers by meeting directly to the experts. And then researcher obtained draft back within one week.

4. Data Manipulation and Analysis

Validate analyze data and interpret data. Criteria by using the mean interpretation criterion (Boonchom Sri-sa-ard, 2010).

4.51 - 5.00 refers to suitability and feasibility as highest level.

3.51 - 4.50 refers to suitability and feasibility as high level.

2.51 - 3.50 refers to suitability and feasibility as medium level.

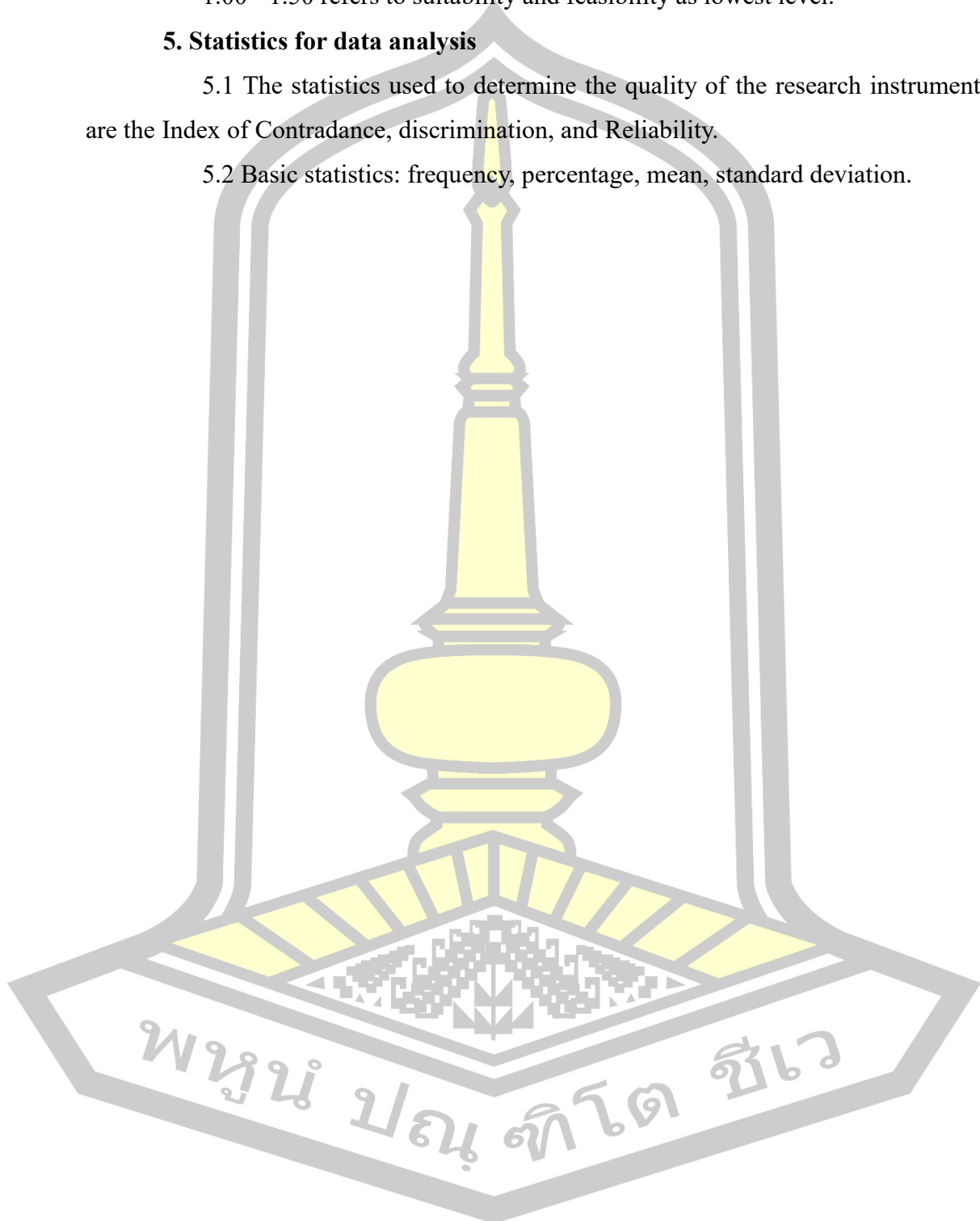
1.51 - 2.50 refers to suitability and feasibility as low level.

1.00 - 1.50 refers to suitability and feasibility as lowest level.

5. Statistics for data analysis

5.1 The statistics used to determine the quality of the research instrument are the Index of Contradance, discrimination, and Reliability.

5.2 Basic statistics: frequency, percentage, mean, standard deviation.



CHAPTER IV

RESULT OF DATA ANALYSIS

The research on a program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. The researcher analyzed results of the data in the following:

1. The symbols for data analysis representative
2. Steps for data analysis sequence
3. Results for Data analysis

The Symbol for data analysis representative

X	replace	Mean
S.D.	replace	Standard Deviation
PNImodified	replace	Priority Need Index modified
N	replace	Population
I	replace	Importance or Desired State
D	replace	Degree of success or Existence State

Steps for data analysis sequence

Results of the analysis are divided into 3 phases:

Phase 1: investigating the components of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Phase 2: Exploring existent state, desired state and PNImodified of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Phase 3: Creating a program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Results for Data analysis

Phase 1: Investigating the components of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Step 1 The research results found that the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia consisting of 5

components as follows: 1) knowledge literacy, 2) didactic ability, 3) digital literacy, 4) uphold fundamental principles and break new ground, 5) Moral education ability.

Step 2 Evaluation the suitability components of competence of art teachers in university under the background of “New Liberal Arts”, at table 7.

Results of the evaluation of the suitability of the components of competence of art teachers in university under the background of “New Liberal Arts” by experts.

Table 7 Mean, and level of suitability of components of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Components of competence of art teachers	\bar{x}	S.D.	Level
1.Knowledge literacy	4.80	0.40	Highest
2.Didactic ability	4.80	0.40	Highest
3.Digital literacy	4.80	0.40	Highest
4.Uphold fundamental principles and break new ground	4.60	0.49	Highest
5.Moral education ability	4.80	0.40	Highest
Total	4.76	0.41	Highest

From the table 7, it was found that the components of competence of art teachers in university under the background of “New Liberal Art” in Ningxia were overall at the highest level ($\bar{x} = 4.76$) When considering each aspect, it was found that the suitability levels was ranked from highest to lowest as follows: Knowledge literacy, Didactic ability, Digital literacy and Moral education ability ($\bar{x} = 4.80$), and Uphold fundamental principles and break new ground ($\bar{x} = 4.6$)

Phase 2: Exploring existent state, desired state and priority needs of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

The existent state, desired state and priority needs of competence of art teachers in universities under the background of “New Liberal Arts” in Ningxia were explored through questionnaires, and the analysis was divided into two parts.

The results of the preliminary data analysis of the questionnaire respondents were a study of the opinions of art teachers from a sample group of art

teachers in 6 universities and colleges in Ningxia Hui autonomous region. The researcher collected research data from a sample group of 205 people.

Part 1: The results for respondent demographics are shown in table 8.

Table 8 Shows the frequencies and percentages of respondent demographics

Basic information of the respondents	N = 205 (number)	
	frequency	Percent (%)
Gender		
Female	115	56.1
Male	90	43.9
Total	205	100.0
Age		
Under 30 years old	17	8.3
30-39 years old	48	23.5
40-49 years old	113	55.1
50-59 years old	22	10.7
Over 60 years old	5	2.4
Total	205	100.0
Position		
Administrator and teacher	20	9.8
Teacher	185	90.2
Total	205	100.0
Educational background		
Bachelor	18	8.8
Master	157	76.6
Doctor	30	14.6
Total	205	100.0
5.Title		
Teaching assistant	22	10.7
Lecturer	124	60.5
Associate professor	45	22.0
Professor	14	6.8
Total	205	100.0

From table 8, it was found that art teachers who participated in the questionnaire have a 12.2% higher rate of females than males. Their ages are basically concentrated in 40-49 years old. 8.8% of arts teachers have administrative positions and management responsibilities. 76.6% of the art teachers have a master's degree and 14.6% of arts teachers have obtained a doctorate. Most of them have served lecturer qualifications.

Part 2: The results of existent state, desired state and PNI modified of competence of art teachers in Ningxia university under the background of “New

Liberal Arts” are shown in table 9.

Table 9 The existent state, desired state and PNImodified of components of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Classified by components

Components	Existent state			Desired state			PNImodified	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. Knowledge literacy	3.32	0.26	medium	4.59	0.33	highest	0.382	3
2. Didactic ability	3.35	0.17	medium	4.66	0.14	highest	0.392	2
3. Digital literacy	3.17	0.54	medium	4.42	0.60	high	0.397	1
4. Uphold fundamental principles and break new ground	3.54	0.31	high	4.60	0.17	highest	0.300	5
5. Moral education ability	3.50	0.27	medium	4.57	0.18	highest	0.307	4
Total	3.37	0.51	medium	4.57	0.41	highest	0.358	-

From the table 9, it was found that the existent state of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the medium level ($= 3.37$). Considering each aspect, it was found that the existent state level was ranked from highest to lowest as follows: 1) Uphold fundamental principles and break new ground, 2) Moral education ability, 3) Didactic ability, 4) Knowledge literacy, and 5) Digital literacy.

The desired state of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the highest level ($\bar{x} = 4.57$). Considering each aspect, it was found that the desired state level was ranked from highest to lowest as follows: 1) Didactic ability, 2) Uphold fundamental principles and break new ground, 3) Knowledge literacy, 4) Moral education ability, and 5) Digital literacy.

The Priority need index modified (PNImodified), the order of priority need index modified rank as the follows, the first, Digital literacy, the second, Didactic ability, the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground.

In order to analyze the competence status of art teachers in Ningxia

universities under the background of “New Liberal Arts” more clearly, the following will show the data of different items under each component separately.

Table 10 The existent state, desired state and PNImodified of components of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Classified by items of component of knowledge literacy

Knowledge literacy	Existent state			Desired state			PNI modified	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. You can systematically master the basic knowledge and fundamental skills of the subjects you teach, making connections, transferring and applying knowledge.	3.80	0.84	high	4.83	0.38	highest	0.271	7
2. You have a keen insight into the cutting-edge dynamics of discipline, and can track and study the latest research results and academic developments in a timely manner.	3.31	0.58	medium	4.65	0.54	highest	0.406	4
3. You have the ability to apply interdisciplinary knowledge and approaches to problem solving.	2.78	0.52	medium	4.31	0.78	high	0.549	1

Table 10 (Continued)

Knowledge literacy	Existent state			Desired state			PNI modified	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
4. You can cross disciplinary boundaries and apply interdisciplinary knowledge and methods to solve problems in teaching and research.	3.00	0.07	medium	4.54	0.68	highest	0.515	2
5. You can deeply understand the basic theories of the nature, purpose, and function of art education in the context of the new liberal arts, as well as the relationship between art education and social and individual development.	3.40	0.66	medium	4.64	0.55	highest	0.368	5
6. You can master students learning psychology, motivation theories and motivational strategies, etc.	3.40	0.79	medium	4.55	0.50	highest	0.339	6

Table 10 (Continued)

Knowledge literacy	Existent state			Desired state			PNI modified	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
7. You are familiar with a variety of teaching methods and strategies.	3.68	0.52	high	4.65	0.48	highest	0.264	8
8. You have a broad knowledge of literature, history, philosophy, and politics, etc.	3.20	0.56	medium	4.53	0.54	highest	0.416	3
Total	3.32	0.26	medium	4.59	0.33	highest	0.382	-

From the table 10, it was found that the existent state of knowledge literacy of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the medium level ($\bar{x} = 3.32$). Considering each item, it was found that the existent state level was ranked the most, You can systematically master the basic knowledge and fundamental skills of the subjects you teach, making connections, transferring and applying knowledge. ($\bar{x} = 3.80$), second most, You are familiar with a variety of teaching methods and strategies. ($\bar{x} = 3.68$), and least, You have the ability to apply interdisciplinary knowledge and approaches to problem solving. ($\bar{x} = 2.78$).

The desired state of knowledge literacy of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the highest level ($\bar{x} = 4.59$). Considering each item, it was found that the desired state level was ranked the most, You can systematically master the basic knowledge and fundamental skills of the subjects you teach, making connections, transferring and applying knowledge. ($\bar{x} = 4.83$), second most, You have a keen insight into the cutting-edge dynamics of discipline, and can track and study the latest research results and academic developments in a timely manner ($\bar{x} = 4.65$), and You are familiar with a variety of teaching methods and strategies. ($\bar{x} = 4.65$), and least You have the ability to apply

interdisciplinary knowledge and approaches to problem solving. ($\bar{x} = 4.31$).

The priority need index modified (PNImodified), the order of priority need index modified, the first, You have the ability to apply interdisciplinary knowledge and approaches to problem solving. (PNImodified = 0.549), the second, You can cross disciplinary boundaries and apply interdisciplinary knowledge and methods to solve. (PNImodified = 0.515), and the least, You have a broad knowledge of literature, history, philosophy, and politics, etc. (PNImodified = 0.416)

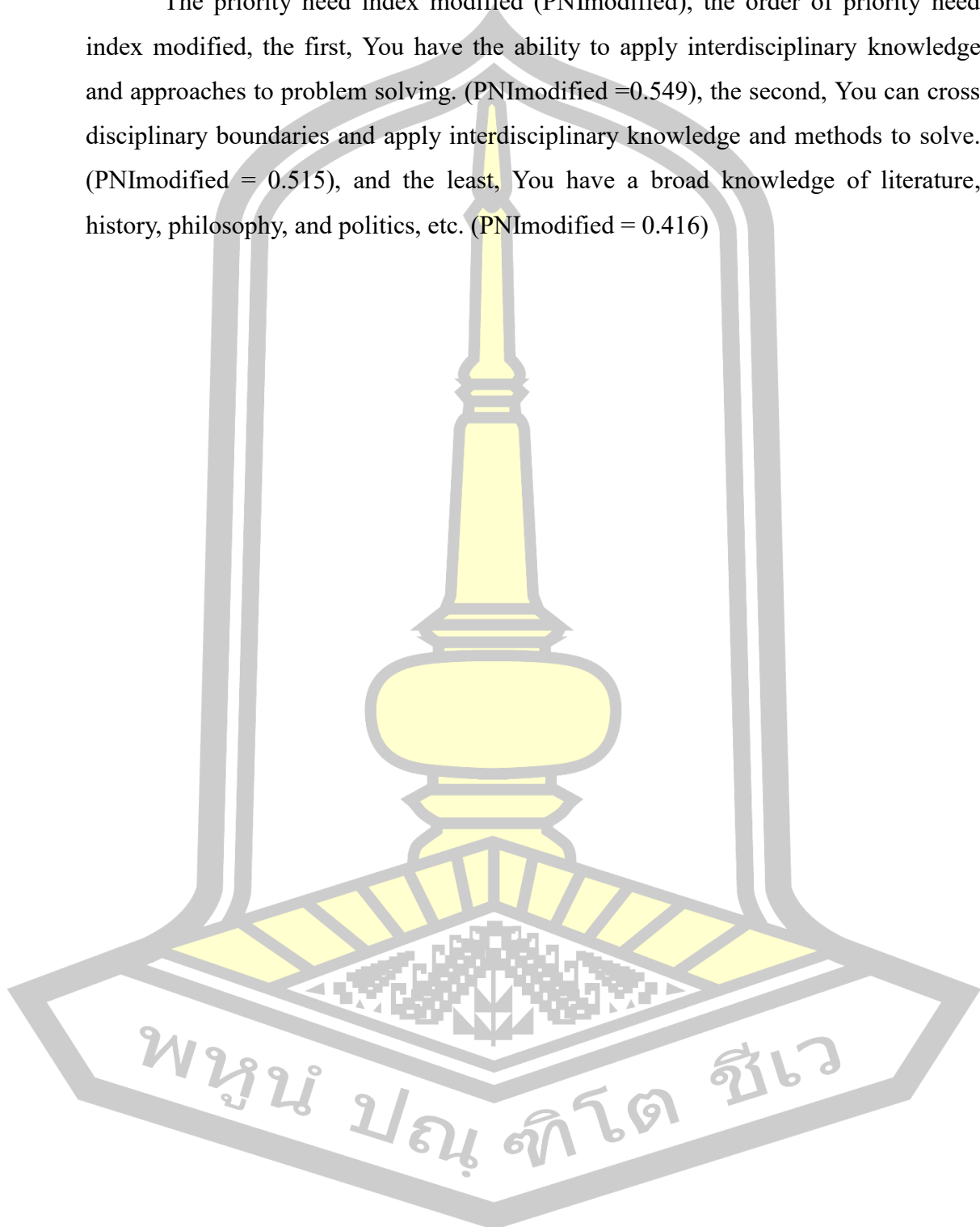


Table 11 The existent state, desired state and PNI modified of Components of Competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Classified by items of component of didactic ability

Didactic ability	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. You can define the specific objectives of classroom teaching and ensure the relevance and effectiveness of teaching activities.	3.64	0.52	high	4.78	0.41	highest	0.312	11
2. You are well versed in the teaching materials and can accurately emphasize and explain the key points, difficulties and critical points of the teaching materials.	3.61	0.56	high	4.82	0.39	highest	0.333	10
3. You can apply advanced teaching concepts and adopt appropriate teaching strategies and methods.	3.28	0.54	medium	4.58	0.52	highest	0.397	7
4. You can design scientific teaching procedures.	3.31	0.55	medium	4.72	0.45	highest	0.426	4
5. You can integrate or develop intelligent teaching resources through professional knowledge and information technology means to meet dynamic teaching needs.	3.02	0.21	medium	4.63	0.52	highest	0.532	1

Table 11 (Continued)

Didactic ability	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
6. You can teach students in accordance with their aptitude.	3.31	0.56	medium	4.60	0.49	highest	0.392	8
7. You can communicate effectively with students and other teachers to better fulfil your teaching work.	3.63	0.53	high	4.71	0.46	highest	0.297	13
8. You can grasp the feedback information of teaching in time, output reliable information accurately, and exclude fallacious information in time.	3.13	0.68	medium	4.65	0.55	highest	0.484	3
9. You can adjust the teaching content, change the teaching procedure, and adjust the teaching methods according to the actual situation of teaching.	3.42	0.53	medium	4.62	0.49	highest	0.349	9
10. You have good classroom management skills and can effectively stimulate student interaction and participation.	3.22	0.68	medium	4.51	0.58	highest	0.399	6

Table 11 (Continued)

Didactic ability	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D	Level	\bar{x}	S.D	Level		
11. You can construct a comprehensive, scientific and rational evaluation system that combines quantitative and qualitative evaluation.	3.62	0.52	high	4.70	0.46	highest	0.298	12
12. You can construct assessment tools that effectively reflect student learning and ability levels.	3.01	0.30	medium	4.61	0.49	highest	0.531	2
13. You have the ability to summarize and reflect, and can identify your strengths and weaknesses in the evaluation process.	3.34	0.61	medium	4.69	0.46	highest	0.404	5
Total	3.35	0.17	medium	4.66	0.14	highest	0.392	-

From the table 11, it was found that the existent state of didactic ability of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the medium level ($\bar{x} = 3.35$). Considering each item, it was found that the existent state levels was ranked the most, You can define the specific objectives of classroom teaching and ensure the relevance and effectiveness of teaching activities. ($\bar{x} = 3.64$), second most, You can communicate effectively with students and other teachers to better fulfil your teaching work. ($\bar{x} = 3.62$), and least, You can construct assessment tools that effectively reflect student learning and ability levels. ($\bar{x} = 3.01$).

The desired state of didactic ability of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the highest level ($\bar{x} = 4.66$). Considering each item, it was found that the desired state level was ranked the most, You are well versed in the teaching materials and can accurately emphasize and

explain the key points, difficulties and critical points of the teaching materials. ($\bar{x} = 4.82$), second most, You can define the specific objectives of classroom teaching and ensure the relevance and effectiveness of teaching activities. ($\bar{x} = 4.78$), and least, You have good classroom management skills and can effectively stimulate student interaction and participation. ($\bar{x} = 4.51$).

The priority need index modified (PNImodified), the order of priority need index modified the first, you can integrate or develop intelligent teaching resources through professional knowledge and information technology means to meet dynamic teaching needs. (PNImodified = 0.532) the second, You can construct assessment tools that effectively reflect student learning and ability levels. (PNImodified = 0.531) and the least, You can communicate effectively with students and other teachers to better fulfil your teaching work. (PNImodified = 0.297)

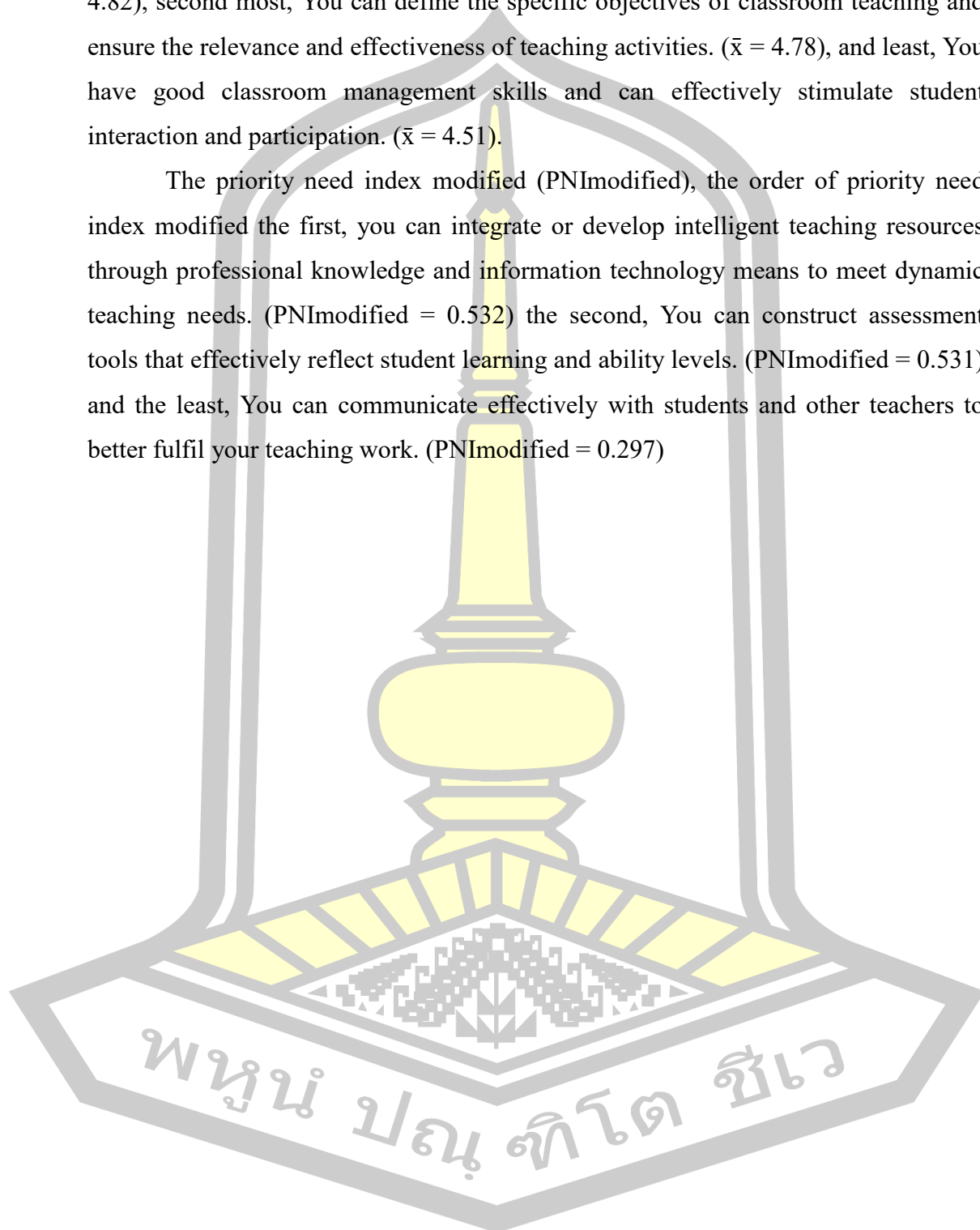


Table 12 The existent state, desired state and PNImodified of Components of Competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Classified by items of component of digital literacy

Digital literacy	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. You can recognize the important role of digital technology in enhancing teaching efficiency, optimizing the allocation of teaching resources and promoting educational equity.	3.56	0.72	high	4.65	0.50	highest	0.305	10
2. You can pay attention to the new challenges and opportunities brought by the development of digital technology.	3.05	0.81	medium	4.64	0.48	highest	0.521	2
3. You are willing to use digital technology to empower teaching, art creation and research	3.23	0.57	medium	4.25	0.72	high	0.314	8
4. You have knowledge and skills in common digital technologies.	3.23	0.49	medium	4.24	0.72	high	0.312	9
5. You have the ability to continuously learn new knowledge and skills of digital technologies.	2.97	1.28	medium	4.24	0.73	high	0.427	6

Table 12 (Continued)

Digital literacy	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
6. You have the ability to use various digital technology tools and teaching platforms proficiently.	2.95	0.35	medium	4.24	0.72	high	0.440	4
7. You can design teaching programs and learning environments that meet the characteristics of digital teaching.	3.01	0.67	medium	4.43	0.72	high	0.471	3
8. You can actively explore new modes, methods and paths of digital teaching to achieve informatization and intelligence in classroom teaching.	3.15	0.61	medium	4.52	0.60	highest	0.437	5
9. You can conduct in-depth analysis of students' learning data using data analysis models to visualize and interpret academic data	2.56	0.94	medium	4.24	0.75	high	0.657	1
10. In the process of using digital technology, you can strictly comply with relevant laws, regulations and policy requirements to ensure the legality and normality of teaching activities.	3.96	0.27	high	4.83	0.37	highest	0.222	11

Table 12 (Continued)

Digital literacy	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
11. You can protect personal information , maintain work data security, and focus on network security protection to ensure the stability and security of the teaching environment.	3.18	0.64	medium	4.37	0.74	high	0.376	7
Total	3.17	0.54	medium	4.42	0.60	high	0.397	-

From the table 12, it was found that the existent state of digital literacy of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the medium level ($\bar{x} = 3.17$). Considering each item, it was found that the existent state level was ranked the most, In the process of using digital technology, you can strictly comply with relevant laws, regulations and policy requirements to ensure the legality and normality of teaching activities. ($\bar{x} = 3.96$), second most, You can recognize the important role of digital technology in enhancing teaching efficiency, optimizing the allocation of teaching resources and promoting educational equity. ($\bar{x} = 3.56$), and least, You can conduct in-depth analysis of students' learning data using data analysis models to visualize and interpret academic data. ($\bar{x} = 2.56$).

The desired state of digital literacy of art teachers in university under the background of “New Liberal Arts” in Ningxia was overall at the high level ($\bar{x} = 4.42$). Considering each item, it was found that the desired state level was ranked the most, In the process of using digital technology, you can strictly comply with relevant laws, regulations and policy requirements to ensure the legality and normality of teaching activities. ($\bar{x} = 4.83$), second most, You can recognize the important role of digital technology in enhancing teaching efficiency, optimizing the allocation of teaching resources and promoting educational equity. ($\bar{x} = 4.65$), and least ,You have the ability

to continuously learn new knowledge and skills of digital technologies, you have the ability to use various digital technology tools and teaching platforms proficiently and you can conduct in-depth analysis of students' learning data using data analysis models to visualize and interpret academic data ($\bar{x} = 4.24$).

The priority need index modified (PNImodified), the order of priority need index modified the first, You can conduct in-depth analysis of students' learning data using data analysis models to visualize and interpret academic data. (PNImodified = 0.657), the second, You can pay attention to the new challenges and opportunities brought by the development of digital technology. (PNImodified = 0.521), and least, In the process of using digital technology, You can strictly comply with relevant laws, regulations and policy requirements to ensure the legality and normality of teaching activities. (PNImodified = 0.222).

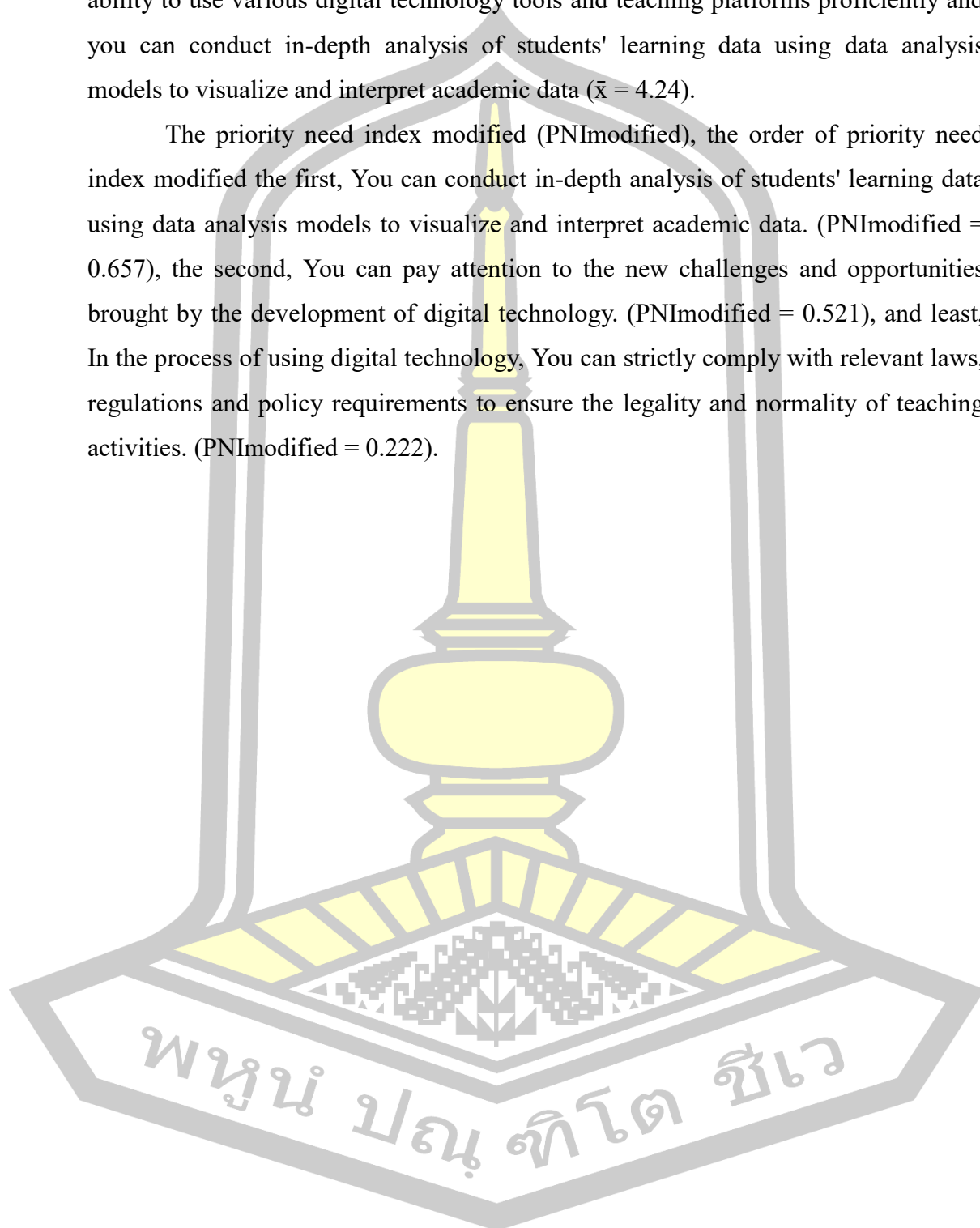


Table 13 The existent state, desired state and PNI_{modified} of Components of Competence of art teachers in university under the background of "New Liberal Arts" in Ningxia. Classified by items of component of uphold fundamental principles and break new ground

Uphold fundamental principles and break new ground.	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. In the construction of the new liberal arts, you can maintain the basic principles and basic teaching rules of the art discipline.	3.76	0.82	high	4.70	0.53	highest	0.249	7
2. In the process of teaching art, you can carry forward the spiritual heritage and cultural qualities of the Chinese nation.	3.84	0.87	high	4.73	0.55	highest	0.230	8
3. In the process of teaching and scientific research, you can strictly abide by academic norms.	4.23	0.49	high	4.84	0.36	highest	0.144	9
4. In the process of teaching and research, you can be strictly firm in your political stance.	4.63	0.48	highest	4.84	0.37	highest	0.044	10

Table 13 (Continued)

Uphold fundamental principles and break new ground.	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
5. You can constantly explore and practice new teaching methods and actively carry out teaching reforms	3.20	1.06	medium	4.50	0.55	high	0.409	4
6. You can integrate the frontiers of your discipline and the needs of the society, and update and enrich the teaching contents in a timely manner.	3.24	1.06	medium	4.61	0.49	highest	0.423	3
7. You can reform the traditional way of academic evaluation and comprehensively and dynamically evaluate the learning situation of your students.	3.40	1.11	medium	4.60	0.49	highest	0.354	5
8. You can actively declare and carry out innovative and applied research topics, and regularly write and publish academic papers.	3.03	0.88	medium	4.52	0.58	highest	0.490	2

Table 13 (Continued)

Uphold fundamental principles and break new ground.	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
9. You can flexibly use various research methods and technical means, such as big data analysis and artificial intelligence, to improve the efficiency and accuracy of research.	2.82	0.87	medium	4.32	0.55	high	0.533	1
10. You can transform scientific research results into practical applications, promote the socialization and industrialization of scientific research results.	3.21	0.84	medium	4.33	0.56	high	0.346	6
Total	3.54	0.31	high	4.60	0.17	highest	0.3000	-

From the table 13, it was found that the existent state of uphold fundamental principles and break new ground was overall at the medium level ($\bar{x} = 3.54$). Considering each item, it was found that the existent state level was ranked the most, In the process of teaching and research, you can be strictly firm in your political stance. ($\bar{x} = 4.63$), second most, In the process of teaching and scientific research, you can strictly abide by academic norms. ($\bar{x} = 4.23$), and least, You can flexibly use various research methods and technical means, such as big data analysis and artificial intelligence, to improve the efficiency and accuracy of research. ($\bar{x} = 2.82$).

The desired state of uphold fundamental principles and break new ground was overall at the high level ($\bar{x} = 4.60$). Considering each item, it was found that the desired state level was ranked the most, In the process of teaching and scientific research, you can strictly abide by academic norms and in the process of teaching and research, you can be strictly firm in your political stance. ($\bar{x} = 4.84$), second most, In the process of teaching art, you can carry forward the spiritual heritage and cultural qualities of the Chinese nation. ($\bar{x} = 4.73$), and least, You can flexibly use various research methods and technical means, such as big data analysis and artificial intelligence, to improve the efficiency and accuracy of research. ($\bar{x} = 4.32$).

The priority need index modified (PNImodified), the order of priority need index modified the first, You can flexibly use various research methods and technical means, such as big data analysis and artificial intelligence, to improve the efficiency and accuracy of research. (PNImodified = 0.533), the second, You can actively declare and carry out innovative and applied research topics, and regularly write and publish academic papers. (PNImodified = 0.490), and least, In the process of teaching and research, you can be strictly firm in your political stance. (PNImodified = 0.044).

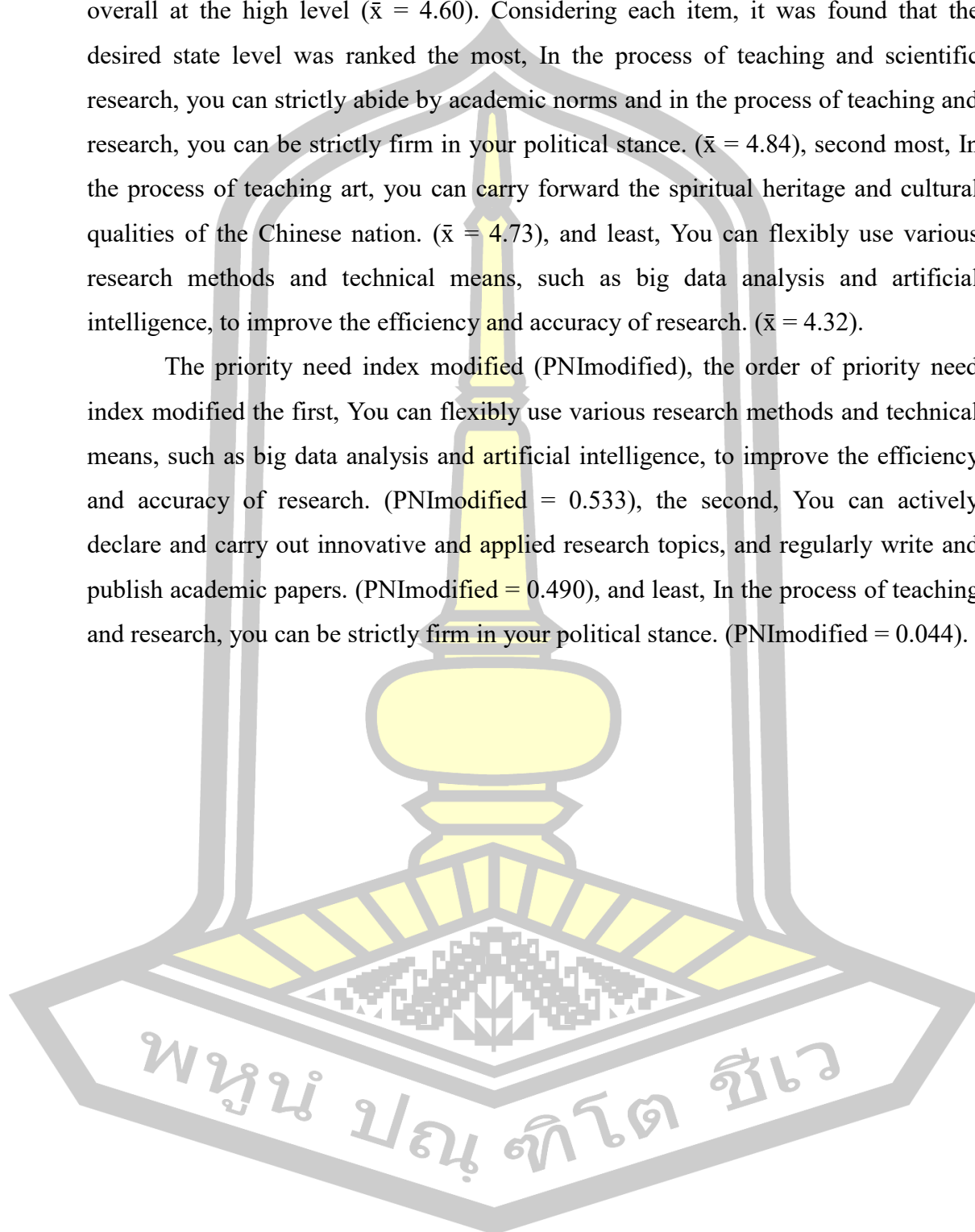


Table 14 The existent state, desired state and PNI_{modified} of Components of Competence of art teachers in university under the background of "New Liberal Arts" in Ningxia. Classified by items of component of uphold fundamental principles and break new ground

Moral education ability	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. You have a strong sense of professional responsibility and mission.	3.68	0.82	high	4.73	0.44	highest	0.285	5
2. You are caring and have good empathy skills.	3.61	0.81	high	4.65	0.48	highest	0.286	4
3. You have the professionalism and dedication to devote yourself to teaching and educating students all year round.	3.81	0.85	high	4.63	0.51	highest	0.216	8
4. You have enough confidence in your professional knowledge and skills, etc., and believe that you can adapt to the new liberal arts construction environment and do a good job in teaching.	3.60	0.81	high	4.53	0.53	highest	0.257	6

Table 14 (Continued)

Moral education ability	Existent state			Desired state			PNI _{modified}	Rank
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
5. You can fully explore the ideological and political elements in the teaching content of the course and guide students to strengthen their political stance and values.	3.42	0.73	medium	4.61	0.49	highest	0.348	3
6. You can systematically guide students to improve their professionalism and work ethic in relation to the needs of society.	3.59	0.76	high	4.51	0.50	highest	0.257	7
7. You can inspire students to learn and think on their own, developing critical thinking and higher-order cognition.	3.17	0.52	medium	4.50	0.53	high	0.418	2
8. You can improve your students' international perspective and intercultural.	3.10	0.77	medium	4.43	0.56	high	0.430	1
Total	3.50	0.27	medium	4.57	0.18	highest	0.307	-

From the table14, it was found that the existent state of moral education ability was overall at the medium level ($\bar{x} = 3.50$). Considering each item, it was found that the existent state level was ranked the most, You have the professionalism and dedication to devote yourself to teaching and educating students all year round. ($\bar{x} = 3.81$), second most, You have a strong sense of professional responsibility and

mission. ($\bar{x} = 3.68$), and least, You can improve your students' international perspective and intercultural. ($\bar{x} = 3.10$).

The desired state of moral education ability was overall at the highest level ($\bar{x} = 4.57$). Considering each item, it was found that the desired state levels was ranked the most, You have a strong sense of professional responsibility and mission. ($\bar{x} = 4.73$), second most, You are caring and have good empathy skills. ($\bar{x} = 4.65$), and least, You can improve your students' international perspective and intercultural. ($\bar{x} = 4.43$).

The priority need index modified (PNImodified), the order of priority need index modified the first, You can improve your students' international perspective and intercultural. (PNImodified = 0.430), the second, You can inspire students to learn and think on their own, developing critical thinking and higher-order cognition. (PNImodified = 0.418), and least, You have the professionalism and dedication to devote yourself to teaching and educating students all year round. (PNImodified = 0.216).

Phase 3: Creating a Program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Step 1: Analysis and presentation of the in-depth interview results

According to the results of the study on the priority value of priority needs index modified (PNImodified), existent state, desired state of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. To create the program to enhance competence of t art teachers in university under the background of “New Liberal Arts” in Ningxia. The results of the data analysis from the interview 5 experts, as follows:

1. Components of program

From the study, documents, textbooks, the components of program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia, it consists of 5 components: 1) Principles 2) objectives 3) content 4) development process 5) evaluation, which are consistent with Opinions of experts, the following statement.

“...The 5 components of the program have comprehensive components and content. Principles ensure compliance and sustainability of the program.

Objectives provide a clear direction and motivation for the program. Content is the core of the program and where the value lies. Development process is the strategy and way to achieve the objectives. Evaluation is the objective measurement of the program results. The interconnectedness and mutual support of these five components, in accordance with program management best practice, is instrumental in enhancing the success and quality of the program...”

(Interviewee 1, October 15, 2024: interview)

“...It is evident that these five components are comprehensive in nature, as they encompass the entirety of the program process. Moreover, they reflect the fundamental concepts of program management, namely planning, execution, monitoring and improvement. Consequently, this composition is considered to be both comprehensive and practical in terms of enhancing the competence of art teachers in university in Ningxia...”

(Interviewee 2, October 15, 2024: interview)

“...The five components of the model are commonplace and pragmatic in the realm of program management. The principles proffer guidelines for the program, the objectives delineate the program's clear pursuit, the content defines the scope, the development process delineates the execution path of the program, and the evaluation functions as the program's feedback mechanism. The five parts constitute a closed-loop system that contributes to the implementation and continuous improvement of the program...”

(Interviewee 3, October 16, 2024: interview)

“...The five components of the model can be regarded as a series of developments that adhere to the concept of teacher development. In terms of content, the model is comprehensive and can be implemented in practice...The evaluation guidelines should be set to be consistent with the program objectives.”

(Interviewee 4, October 16, 2024: interview)

“...The five components of the model are commonplace and pragmatic in the realm of program management. The principles proffer guidelines for the program, the objectives delineate the program's clear pursuit, the content defines the scope, the development process delineates the execution path of the program, and the evaluation functions as the program's feedback mechanism. The five parts constitute a closed-

loop system that contributes to the implementation and continuous improvement of the program ...”

(Interviewee 5, October 18, 2024: interview)

In summary, summarizing the interview opinions of five experts, the components of program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia, it consists of 5 components: 1) Principles 2) objectives 3) content 4) development process 5) evaluation, which are consistent with Opinions of experts.

2. Principles of enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia

From interviews with experts on key issues enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia, adjusting using the 70:20:10 Learning Model. Experts have consistent opinions on using the 70:20:10 Learning Model in developing the competence of art teachers, the following.

The 70:20:10 principle emphasizes the importance of combining practice, communication and formal learning. This principle clearly indicates that practical experience is the key to developing teacher competence, while interpersonal communication and formal learning are necessary complements. Applying the 70:20:10 principle in a program to enhance teacher competence is an effective strategy that both meets the characteristics of adult learning and enhances the effectiveness of the training.

(Interviewee 1, October 15, 2024: interview)

The 70:20:10 principle has wide application value in programs to enhance teachers’ competence. By combining challenging tasks, communication and feedback, and formal learning, teachers’ teaching ability and professionalism can be effectively enhanced. At the same time, focusing on teachers' personal development needs is key to ensuring the success of training programs.

(Interviewee 2, October 15, 2024: interview)

This principle aims to maintain a balance between practice and learning while focusing on the guiding role of the leader. It provides a scientific and practical framework for enhancing teachers' competence. Through the rational allocation of learning resources and practice opportunities, it helps teachers to continuously

enhance their competence in their work, and to better adapt to and cope with the work challenges of building the new liberal arts.

(Interviewee 3, October 16, 2024: interview)

70% Practical challenges are at the core of enhancing teachers' competence. Teachers should be encouraged to try out new teaching methods and strategies in their daily teaching, and to identify and solve problems and optimize their teaching skills through continuous practice. 20% communication and feedback is an indispensable part of the process. Teachers should actively participate in teaching and research activities, share their teaching experience and insights with their peers, and establish an effective feedback mechanism. 10% formal learning provides teachers with the necessary knowledge base and theoretical guidance. Schools or training institutions should provide systematic training courses on pedagogical theories, teaching methods and techniques, etc., to help teachers build up a solid professional knowledge system. This is an integrated path that emphasizes the organic combination of practice, interaction and formal learning.

(Interviewee 4, October 16, 2024: interview)

It has proved to be an effective tool as a learning support and development tool, emphasizing the importance of practical experience in professional development, while also pointing to the role of communication with others and classroom learning The effective use of this principle implies support and attention to efficient learning and development of teachers, especially that teachers can grow and develop by taking on more responsibilities and engaging in more challenging programs and tasks, and the 70:20:10 principle reflects the dynamic and integrated nature of the development of teacher competence.

(Interviewee 5, October 18, 2024: interview)

In summary, summarizing the interview opinions of the five experts, they unanimously agreed on adopting the 70:20:10 Learning Model to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

3. The methods of development to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia

From interviews with experts on key issues. The methods of development consisting of Principles and methods of competence of teacher development by the Learning Model 70:20:10 and methods of developing social competence, consisting of 1) self-learning from practical work, 2) assignment, 3) coaching, 4) job shadowing, 5) training.

“...The integration of pedagogical approaches, including training, assignment, shadowing and coaching, has been demonstrated to facilitate comprehensive and effective enhancement of teachers' competence. These methodologies encompass a comprehensive array of domains, encompassing theoretical learning, practical exercises, on-site observation and personalized guidance, thereby providing teachers with a multifaceted growth trajectory. Training provides a systematic knowledge framework, task practice exercises the teacher's application ability, job shadowing allows the teacher to go deep into the front line of teaching to accumulate experience, and mentoring provides professional growth guidance and advice...”

(Interviewee 1, October 15, 2024: interview)

“...The integration of multifaceted methodologies, encompassing training, assignment, job shadowing and coaching, has been identified as a pivotal factor in the substantial enhancement of pedagogical proficiency among art teachers. Collectively, these methodologies constitute a comprehensive and interconnected framework for the cultivation of competence. Training provides art teachers with a theoretical foundation, task practice enables them to hone their skills in authentic scenarios, job shadowing fosters a deep comprehension of the intricacies involved in actual teaching practices, and coaching ensures precise enhancement tailored to the unique needs of each art teacher. This combination of methods has been shown to facilitate comprehensive and rapid growth for those engaged in the field...”

(Interviewee 2, October 15, 2024: interview)

“...It is evident that the five methods under consideration are both scientific and effective in enhancing the competence of art teachers in Ningxia colleges and university. However, it is also important to acknowledge the issues that must be addressed when implementing these methods. For instance, coaching can provide

targeted guidance and feedback to individual teachers; however, it is essential to identify a suitable coach. Assignment of tasks to teachers should possess clear objectives and requirements, be challenging to stimulate motivation and creativity, and be completed with timely feedback and evaluation...”

(Interviewee 3, October 16, 2024: interview)

“...Agree with the development methods to develop the competence of art teachers in university under the background of New Liberal Arts in Ningxia. In the context of the ‘New Liberal Arts’, the competence of art teachers is a multifaceted structure that needs to be improved in a comprehensive way, which requires a variety of methods, such as assigning tasks, mentoring, shadowing, and formal training, all of which are necessary and effective methods. Each method contributes to the overall growth and success of individuals and organizations, promoting a culture of continuous learning and improvement.”

(Interviewee 4, October 16, 2024: interview)

“...The five methods are predicated on the three aspects of practical experience, communication with others and formal learning. The training program is designed to provide teachers with systematic theoretical knowledge and teaching skills, with the assignment of tasks focusing on on-the-job learning. This multifaceted integration of methodologies ensures not only more systematic theoretical learning, but also the circumvention of theoretical indoctrination, the emphasis on the significance of practical experience, the enhancement of teachers' involvement in program training and its efficacy, and the facilitation of comprehensive and rapid growth, enabling them to adapt to the competence requirements for the establishment of the "New Liberal Arts".

(Interviewee 5, October 18, 2024: interview)

In summary, summarizing the interview opinions of the five experts, they unanimously agreed that self-learning from practical work, assignment, coaching, job shadowing and training are effective methods for enhancing the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

4. Suitable number of hours required for each component to enhance competence of art teachers in university through formal course learning

With regard to the Suitable number of hours required of the program to enhance competence of art teachers in Ningxia's university under the background of “New Liberal Arts”, the experts have the following opinions:

“...The appropriate number of hours for development in formal classroom learning formats should be approximately 3 hours per component...”

(Interviewee 1, October 15, 2024: interview)

“...The ideal number of hours would be approximately 3 days of training, which would be approximately 18 hours, and no more than 6 hours of training per competence...”

(Interviewee 2, October 15, 2024: interview)

“...Training, which is approximately 15 hours, content of knowledge literacy 3 hours, content of didactic ability 4 hours, content of digital literacy 4 hours, uphold fundamental principles and break new ground 3 hours, and establish morality and cultivate talents 3 hours...”

(Interviewee 3, October 16, 2024: interview)

“...The training lasts approximately 20 hours, of which 3 hours can be allocated for the training of uphold fundamental principles and break new ground and moral education ability respectively, 4 hours for knowledge literacy and didactic ability respectively, and 6 hours for digital literacy...”

(Interviewee 4, October 16, 2024: interview)

“...Based on the current study, training should be scheduled for 18 hours...Based on the 4 components you provided and the actual situation, I advise you to allocate 6 hours for the weakest component and 3 hours for each of the remaining components. The weaker the aspect, the more you should reinforce theoretical study and lay a solid foundation...”

(Interviewee 5, October 18, 2024: interview)

In summary, summarizing the interview opinions of the five experts, it was dedicated that the number of hours to enhance knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground ability and Moral education ability of art teachers in university through training should be set at 18 hours. This would result in a total program duration of 180 hours.

By summarizing the interviews with the five experts mentioned above, the researcher determined the time allocation for the program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia, as shown in Table 15.

Table 15 Structure of component, principles, methods and hours of the program

Principle	Methods	Components	Hours	Subtotal	Total
70% learning through experience	-Self-learning from practical work -Assignment	Knowledge literacy	27	126	
		Didactic ability	30		
		Digital literacy	33		
		Uphold fundamental principles and break new ground	18		
		Moral education ability	18		
20% learning through others	-Coaching -Job shadowing	Knowledge literacy	6	36	180
		Didactic ability	9		
		Digital literacy	9		
		Uphold fundamental principles and break new ground	6		
		Moral education ability	6		
10% learning through courses	-Training	Knowledge literacy	3	18	
		Didactic ability	3		
		Digital literacy	6		
		Uphold fundamental principles and break new ground	3		
		Moral education ability	3		

From table 15, the program to enhance the competence of art teachers under the background of “New Liberal Arts” in Ningxia university found that the total

development time was 180 hours, divided into experiential learning using 126 hours, learn from others using 36 hours, learning through the formal education using 18 hours.

In consideration of the prioritized need levels and the opinions of the preceding five expert recommendations on the duration of training, the researcher allocated the requisite time for five components of competence, as shown in table 16.

Table 16 The requisite time for 5 components of competence

Components	Principle	Methods	Hours
Knowledge literacy	70% learning through experience	Self-learning from practical work Assignment	27
	20% learning through others	Coaching Job shadowing	6
	10% learning through courses	Formal training or lecture	3
Subtotal			36
Didactic ability	70% learning through experience	Self-learning from practical work Assignment	30
	20% learning through others	Coaching Job shadowing	9
	10% learning through courses	Formal training or lecture	3
Subtotal			42
Digital literacy	70% learning through experience	Self-learning from practical work Assignment	33
	20% learning through others	Coaching Job shadowing	9
	10% learning through courses	Formal training or lecture	6

Table 16 (Continued)

Components	Principle	Methods	Hours
Subtotal			48
Uphold fundamental principles and break new ground	70% learning through experience	Self-learning from practical work Assignment	18
	20% learning through others	Coaching Job shadowing	6
	10% learning through courses	Formal training or lecture	3
Subtotal			27
Moral education ability	70% learning through experience	Self-learning from practical work Assignment	18
	20% learning through others	Coaching Job shadowing	6
	10% learning through courses	Formal training or lecture	3
Subtotal			27
Total			180

From table 16, the program to enhance the competence of art teachers under the background of “New Liberal Arts” in Ningxia university found that the total development time was 180 hours, divided into components of knowledge literacy using 36 hours, components of didactic ability using 42 hours, components of digital literacy using 48 hours, components of uphold fundamental principles and break new ground using 27 hours, and components of establish morality and Moral education ability using 27 hours.

5. Evaluation

With regard to the evaluation of the program to enhance competence of art teachers in Ningxia's university under the background of “New Liberal Arts”, the experts have the following opinions:

“...The evaluation should be conducted in phases, including the program initiation phase, the mid-term implementation phase and the final results presentation phase. Each stage sets specific assessment nodes. At each node, the growth and progress of teachers in the program is demonstrated through teaching demonstrations and sharing of teaching cases, etc. By comparing the data from different assessment nodes, the trends and changes in the competency enhancement of art teachers are analyzed.....One common approach is through classroom observations, where evaluators, often administrators or peer teachers, observe a teacher's instructional methods, classroom management, and engagement with students. This method allows for real-time feedback and can highlight both strengths and areas for improvement. Observations can be structured using specific rubrics that focus on key competencies such as lesson planning, delivery, student interaction, and adaptability to different learning styles...”

(Interviewee 1, October 15, 2024: interview)

“...In the program development stage, assessment is crucial, which is related to the feasibility and success of the program as well as the rationality of resource allocation. Through questionnaires, interviews, data analysis, classroom observation, etc., the current status of teacher competency, training needs, including teachers' self-improvement needs and school development needs, training resources, and expected results are evaluated to provide a scientific basis for developing effective programs to enhance teacher competency...”

(Interviewee 2, October 15, 2024: interview)

“...Specificity of the core of the assessment, the assessment should focus on the specific changes of art teachers in Ningxia colleges and university in terms of knowledge mastery, teaching skills enhancement, student management ability, proficiency in the use of digital technology, and the performance of the course ideology. Teacher competency development is a long-term task that requires continuous tracking and guidance. We must not only assess the development of teacher competence during the implementation of the program, but must also focus on the sustainable development of teacher competence in the course of future work...”

(Interviewee 3, October 16, 2024: interview)

“...Develop clear and quantifiable assessment criteria to ensure the objectivity and accuracy of the assessment results. The assessment criteria should cover a wide range of aspects such as teachers' knowledge, teaching skills, ability to use digital technology, creativity, professional ethics, etc., and set specific scoring rules. Quantitative scoring is used to score teachers according to the assessment criteria, and specific scoring instructions and suggestions for improvement are given. In addition, teachers' self-assessment is very important. Self-assessment tools enable teachers to reflect on their practices, set personal goals, and take ownership of their professional growth. Through regular assessment feedback meetings, the assessment results are discussed with teachers and improvement measures and plans are formulated...”

(Interviewee 4, October 16, 2024: interview)

“...The evaluation of the teacher competency enhancement program should be centered on multi-dimensional core indicators, taking into account demand analysis, goal setting, training resource conditions, training content, training methodology, achievement of program objectives, teacher satisfaction, collaboration and communication within the program team, innovation and sustainability, etc., in order to ensure the comprehensiveness and effectiveness of the evaluation. Firstly, it is necessary to compare the objectives of the program with the actual performance of the teachers after the training, so as to test the actual effectiveness of the training. At the same time, feedback from teachers is widely collected through questionnaires and in-depth interviews to assess their satisfaction with the training and the usefulness of the training content. Secondly, a comprehensive evaluation of the professionalism, teaching ability and training effectiveness of the trainers is a key element in measuring the quality of training. The quality of the training content is equally important, and its pertinence, sophistication, relevance and practicality should be systematically assessed to ensure that the training content can effectively enhance the professional skills and teaching level of teachers. In addition, the applicability of training methods should be scientifically assessed to ensure that they are in line with the laws of education and meet the actual needs of teachers...”

(Interviewee 5, October 18, 2024: interview)

In summary, summarizing the interview opinions of the five experts, evaluation should be carried out throughout the program, at the beginning, middle and end of the program, in order to understand the gradual improvement of teachers' competence. The evaluation process is conducted in 3 stages: Pre-Development Evaluation, Development Evaluation, and Post-Development. Evaluation methods mainly include questionnaires, interviews, behavioral observations, reflective logs, and test.

Step 2: Program to Enhance Competence of Art Teachers in university under the background of New Liberal Arts in Ningxia.

Part 1: Introduction to program to enhance competence art teachers in university under the background of “New Liberal Arts” in Ningxia: As follows:

1. Principles

Teacher competence refers to the professional knowledge, professional skills and professional values that individual teachers possess in relation to the implementation of successful teaching, and it is a deep-level comprehensive trait containing knowledge, teaching skills, emotions, attitudes and internal motivation for teaching, and it is the manifestation of teachers' practical knowledge, and it is the beliefs that are formed after correctly grasping the external things. It is a necessary condition for teachers to engage in excellence in teaching and a major training goal of teacher education institutions. Therefore, teachers can guide all learners to achieve the competence standards set in the education standards by using the principles concept of personnel development according to the 70:20:10 framework.

The 70:20:10 framework, a model that is used around the world in both the public and private sectors. To support learning for both individuals and organizations It is divided into 3 parts as follows: 1) 70% learning through experience is an experience that comes from learning in routine work, receiving challenging assignments, and practicing learning from the experiences that occur. 2) 20% learning through others, which is learning that is supported through interaction with others obtained from mentoring, coaching, and personal networks or working together with others and 3) 10% learning through courses is formal learning. It is learning and development through structured courses and programs that go beyond work.

2. Objectives

To enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia, which mainly includes 1) Knowledge literacy 2) Didactic ability 3) Digital literacy 4) Uphold fundamental principles and break new ground and 5) Moral education ability.

3. Content

Program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia has content scope divided in to 5 modules include:

Module 1: knowledge literacy

Module 2: didactic ability

Module 3: digital literacy

Module 4: uphold fundamental principles and break new ground

Module 5: moral education ability

4. Methods of development

The methods of development for the enhancement of art teachers’ competence in university in Ningxia are follows: 1) Self-learning from practical work, 2) Assignment, 3) Coaching 4) Job Shadowing, and 5) Training.

5. Development process

The program comprises two distinct process:

Step 1, The Training Intensive, corresponds to 10% learning through courses.

Step 2, Engaging in work practice and learning from others in educational institutions, corresponds to 70% learning through experience and 20 % learning through others.

6. Evaluation

The evaluation process is conducted in 3 stages: Pre-Development Evaluation, Development Evaluation, and Post-Development.

Evaluation methods mainly include questionnaires, interviews, behavioral observations, reflective logs and test.

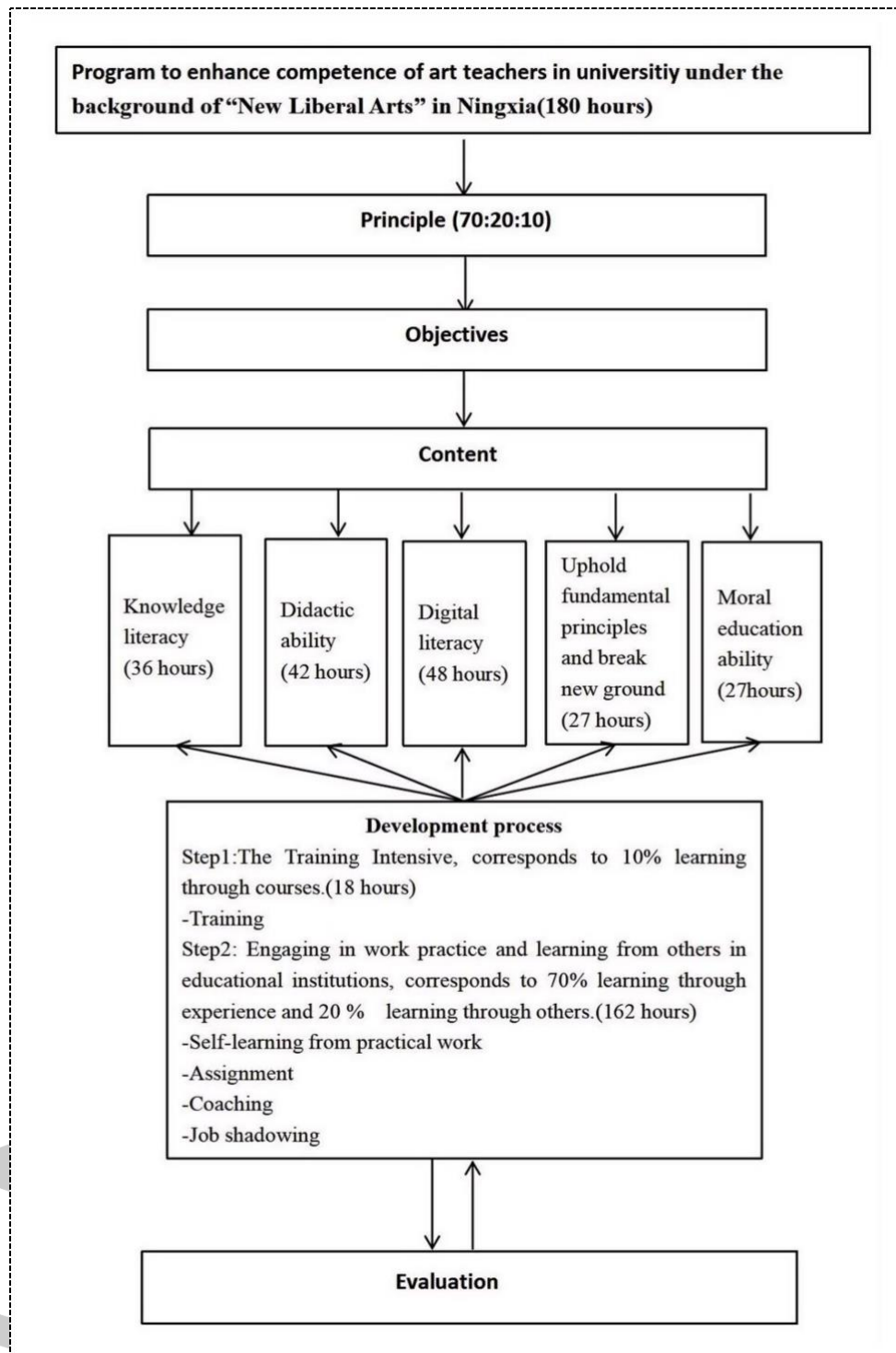


Figure 7 Program to enhance competence of art teachers in university under the background of "New Liberal Arts" in Ningxia

Part 2 Details of the Program to enhance competence art teachers in university under the background of “New Liberal Arts” in Ningxia. As follows:

3.1 Principles

Under the background of “New Liberal Arts”, the competence of art teachers in Ningxia university faces four major problems. First, the limitation of interdisciplinary knowledge and vision. The construction of the new liberal arts emphasizes the intersection and integration of disciplines, but some art teachers are limited by their own educational experiences and disciplinary backgrounds, making it difficult for them to fully adapt to this change, which restricts their teaching innovation and scientific research development in the context of the new liberal arts. Second, the insufficiency of innovation and practice ability. Some art teachers are accustomed to traditional teaching modes and methods and lack the exploration and application of new teaching concepts, new technologies and new methods, which makes their teaching difficult to stimulate students' learning interest and creativity. Third, the difficulty of continuous learning and self-improvement. In the context of the new liberal arts, the speed of knowledge updating is accelerated and technological changes are changing rapidly. However, some art teachers lack continuous learning and self-improvement, and their knowledge structure and teaching concepts are relatively lagging behind, unable to adapt to the teaching needs and student characteristics of the new era. Fourth, the lack of awareness of Civic and Political Education. In the construction of new liberal arts, Civic and political education has been given new connotations and requirements. Some art teachers are unable to effectively integrate the Civic and Political Education into their teaching, which affects the overall development and growth of students.

Competence theory has received widespread attention in the field of education, and the search for refined, specialized and professional teacher competence identification, development and training tools has become an important task for university to transform human resource management and promote teachers' competence enhancement. To address the above problems, Ningxia colleges and university need to take a series of measures to enhance the competence of art teachers. The researcher adopted a three-pronged approach. Firstly, the researcher ensure that we adhere to the guiding principles of Chinese higher education in the new era. Second, the researcher used important documents such as the “Declaration on the Construction of New Liberal Arts” and the “Ten Guidelines for the

Professional Behavior of College Teachers in the New Era” as benchmarks to diagnose the problems faced by art teachers in Ningxia's colleges and university in terms of their competence. Third, the researcher explores the paths and methods to solve these problems. The researcher developed a 30-day program. This program aims to improve the competence of art teachers in Ningxia university and to promote the construction of a “New Liberal Arts” in art disciplines in Ningxia university.

A review of relevant documents and research, as well as multiple case studies from educational institutions with exemplary practices, reveals a consensus on both the methods and the proportion of development. the 70:20:10 model describes the ideal balance between different learning and development styles in the workplace, this model has been around since the mid-1980 (Lawson, 2015), 70% learning through experience, 20% learning through others, 10% learning through courses. The researcher determined the concept of competence development in accordance with the concept 70: 20:10 model. The analysis of needs indicated that the proportion of the need index (PNI_{modified}) for all 5 components rank as the follows, the first, Digital literacy, the second, Didactic ability, the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground. The 5 development methods are as follows: Self-learning from practical work, Assignment, Coaching, Job shadowing and Training. The researcher thus determined the requisite time period for the learning of competence development for art teachers in university under the background of “New Liberal Arts” in Ningxia to be 180 hours, representing the 70% (126 hours) is on job learning or experimental learning, 20% (36 hours) is learn by others, and 10% (18 hours) is the formal course learning, as detailed in the program outline below.

3.2 Objectives

Following the principle of problem orientation, the program aims to effectively solve the problem of improving the competence of art teachers in Ningxia university in five aspects: 1) Knowledge literacy 2) Didactic ability 3) Digital literacy 4) Uphold fundamental principles and break new ground and 5) Moral education ability. And promote the construction of “new liberal arts” in art disciplines in Ningxia university.

The objectives of this program contain three aspects of attitude, knowledge and skills, details of which are as follows:

At the end of this program, art teachers in Ningxia university will

(1) Have greater confidence and internal motivation to develop their own competencies in the context of the 'New Liberal Arts' and have a positive professional attitude.

(2) Have a better grasp and understanding of the knowledge needed to adapt to the construction of the 'New Liberal Arts' and to carry out interdisciplinary teaching.

(3) The ability to apply the necessary skills and digital technologies for teaching and research in the arts in the 'New Liberal Arts'.

3.3 Content

Program to enhance competence of art teachers in university under the background of "New Liberal Arts" in Ningxia has content scope divided in to 5 modules include

Module 1: knowledge literacy

The content in this module is about art teachers in university must have the multidisciplinary and cross-fertilized knowledge structure and knowledge crystals in order to apply to the requirements of the construction of new liberal arts. It includes professional knowledge of a subject, interdisciplinary knowledge literacy, basic theoretical knowledge of pedagogy, knowledge of the humanities, and creative practice knowledge. The organic combination of these knowledge constitutes the unique knowledge structure and ability system of art teachers in colleges and university, reflecting the teachers' knowledge reserves in their professional fields, and providing a solid support for their teaching, scientific research and social service activities.

Module 2: didactic ability

The content in this module is art teachers in university have the ability to use advanced teaching concepts, guide students in their learning activities, complete teaching activities scientifically and effectively, and achieve teaching goals in the context of the new liberal arts, as well as the ability of teachers to manage the entire teaching process. It covers a variety of psychological and behavioral characteristics shown by art teachers in teaching activities, including teaching design ability, teaching implementation ability, teaching regulation ability and teaching evaluation ability.

Module 3: digital literacy

The content in this module is about art teachers in university have the ability to use digital tools and platforms to implement art teaching, scientific research and art creation activities, and to have the ability to reform and innovate the development of

higher art education empowered by artificial intelligence. It includes digital awareness, digital technology knowledge and skills, digital application and digital social responsibility.

Module 4: uphold fundamental principles and break new ground

The content in this module is about in the context of the new liberal arts, art teachers in university have the ability to adhere to the dialectical unity of inheritance and development, regularity and purpose when teaching and educating people. On the one hand, they can adhere to the truth, including adhering to the original mission of "educating people for the Party and educating talents for the country", following the objective laws of art education, and inheriting the fine traditions of art education. On the other hand, they can carry forward the spirit of innovation, expand the instrumental nature of art disciplines, and give new vitality to art disciplines through the social demand-oriented and practice-oriented cultivation of talents.

Module 5: Moral education ability

The content in this module is about art teachers in university have the ability to educate people with morality and cultivate talents with moral character, so that they can better assume their responsibilities as teachers and guides. "Establishing morality" emphasizes the ability of art teachers to insist on moral education as the first priority, to convince people with morality, and to Emphasis on the development of students' character in the teaching of specialized courses; "Cultivating talents" stresses the ability of art teachers to adhere to the "people-centred" principle, to take students as the centre of teaching and learning, to cultivate students' knowledge and practical abilities, and to shape and develop artistic talents that meet the needs of the times. Establishing morality and cultivating talents involves the charisma of the teacher and the emotional dynamics of teaching.

3.4 Methods to enhance competence of art teachers in Ningxia's university.

From studying approaches the teacher development from various academics, the researcher summarized methods for the development of art teachers in university, include 1) Self-learning from practical work, 2) Assignment, 3) Job shadowing, 4) Coaching, 5) Training.

- (1) Self-learning from practical work

Self-learning from practical work is the process by which people acquire knowledge, skills and understanding by engaging in practical work tasks and activities, actively self-directing their own learning journeys, identifying their own learning objectives and taking responsibility for their own learning objectives, where learners are asked to carry out practical tasks and responsibilities without formal or structured guidance. Self-learning from practical work is a form of self-directed learning, this type of learning often occurs in the workplace, self-learning from practical work is less formal and more experiential. This type of learning allows the individual to effectively apply learning skills driven by his own desires and needs, enabling him to learn as he goes, (Nima A. Hussein, 2020) usually through trial and error, observation and reflection, self-learning from practical work is less formal and more experiential. In addition, self-learning from work can foster adaptability and resilience because the learner must overcome challenges and uncertainties on his own.

(2) Assignment

Assignment is an important function of human resources management and usually refers to the placement of personnel and equipment into specific work assignments on a case-by-case basis according to actual needs. It may also refer to the assignment of specific tasks, which may be short-term, long-term, full-time or part-time. Such assignments may be based on a variety of factors, including an individual's skills, experience, availability, and the nature and requirements of the task. Job assignment is an important concept at both the organizational and individual levels, helping to ensure that resources are used efficiently and effectively, as well as contributing to the achievement of individual and team goals.

(3) Job shadowing

Job Shadowing is a vocational training method that allows learners to understand the specific job content, responsibilities, required skills, and work environment of a particular occupation or position by following and observing an employee performing their daily tasks. It differs from mere visits or traditional internships in that it emphasizes hands-on experience and in-depth interaction, allowing individuals to clarify their career goals and development paths, and aiding in a more accurate assessment of their interests and abilities. Furthermore, participants have the opportunity to interact and communicate with professionals in the workplace,

who may become mentors or partners on their future career journeys.

(4) Coaching

Coaching is a comprehensive, systematic and personalized coaching process, in which coaches play the roles of guides and supporters, listen, ask questions, give feedback, emphasize on individual's intrinsic motivation and self-worth, encourage the coaches to take the initiative in thinking, self-reflection and continuous learning, and help them to clarify the goals, formulate the plans, solve the problems and overcome the obstacles. This process not only focuses on the personal growth of the coaches, but also on the overall effectiveness of the team. By stimulating the potential of team members and improving team communication and collaboration, Coaching helps to achieve the overall goal of the team.

(5) Training

Training is an important process aimed at enhancing the professional competence and teaching ability of teachers and promoting their professional development. Teacher training will develop personalized training plans and courses based on the needs and characteristics of different teachers, usually covering multiple aspects, including educational psychology, educational theory, teaching methods, and educational technology. The forms are diverse, including seminars, lectures, training courses, online learning, etc.

3.5 development process

The program is scheduled to take a total of 180 hours to complete, with a duration of 6 hours per day over a period of 30 days. The program comprises two distinct steps:

Step 1, The Training Intensive, corresponds to 10% learning through courses.

Step 2, Engaging in work practice and learning from others in educational institutions, corresponds to 70% learning through experience and 20 % learning through others. The process plan for program implementation is organized as follows table 17.

Table 17 The process plan for program implementation

Content	Time	Media	Undertaker
Step 1 Training Intensive (18 hours)			
Knowledge literacy	3 hours	-Intelligent Classroom -PPT -knowledge handbook	Experts Art teacher
Didactic ability	3 hours		
Digital literacy	6 hours		
Uphold fundamental principles and break new ground	3 hours		
Moral education ability	3 hours		
Step 2 Engaging in work practice and learning from others in educational institutions (162 hours)			
Self-learning from practical work	64.5 hours	-diary note -knowledge handbook	Art teacher
Assignment	61.5 hours		
Coaching	18 hours		Coach Art teacher
Job shadowing	18 hours		
total	180 hours		

In order to show the content of the program more clearly and to facilitate its implementation, the specific activities of each module will be shown in detail one by one below.

According to the personnel development model 70:20:10, the 70% (126 hours) is learning through experience, 20 % (36 hours) is learning through others, and 10% (18 hours) is learning through the courses.

(1) 70% learning through experience

Experiential learning is a form of learning, accumulating experience through practical operation and daily work refers to learning and development through challenging work tasks. These tasks typically involve solving practical problems, program management, and daily job responsibilities. Art teachers accumulate experience and learn new knowledge and skills in the process of solving actual problems. the suitable methods for on job learning are self-learning from practical work (64.5 hours) and assignment (61.5 hours), the details were showed at

the table18.

Table 18 Specific activities of 70% learning through experience

70% learning through experience		
Module	Methods	Content/Activities
subtotal hours: 27 hours		
Module1 Knowledge literacy	Self-learning from practical work (15 hours)	<ol style="list-style-type: none"> 1.To pursue the frontiers of the discipline and improve the professional theoretical level. 2.To practice the concept of art education in the context of "new liberal arts". 3.To explore the teaching path of multidisciplinary intersection and integration. 4. Participate in interdisciplinary research collaboration. 5. Analyze the psychology of student learning. 6. Practice General Secretary Xi Jinping's important ideas on education.
	Assignment (12 hours)	<ol style="list-style-type: none"> 1. Analysis of the application of cutting-edge knowledge in various academic disciplines. 2. Analysis of excellent cases of cross-disciplinary and integrated teaching. 3. Demonstration and sharing of the effectiveness of arts education in the context of the "New Liberal Arts". 4. Learning advanced education concepts and methods.
Module 2 Didactic ability	Self-learning from practical work (15 hours)	<ol style="list-style-type: none"> 1.Improve course design. 2.Integrate or develop intelligent teaching resources through information technology. 3. Implement student-centred teaching and classroom management. 4. Dynamically grasp students' learning needs. 5. Conduct comprehensive and scientific academic assessment of students. 6.Constructively summarize and reflect on teaching.

Table 18 (Continued)

70% learning through experience		
Module	Methods	Content/Activities
		subtotal hours: 30 hours
Module 2 Didactic ability	Assignment (15hours)	<ol style="list-style-type: none"> 1. Complete the revision of the syllabus and lesson plans of the OBE teaching concept. 2. Construct a scientific evaluation system combining quantitative and qualitative evaluation. 3. Designing programs to stimulate student participation in the classroom. 4. Designing personalized teaching strategies 5. Organise reporting on course outcomes.
		subtotal hours: 33 hours
Module 3 Digital literacy	Self-learning from practical work (16.5 hours)	<ol style="list-style-type: none"> 1. Utilise digital teaching platforms for curriculum design and teaching activities. 2. Use digital technology resources for individualized teaching to ensure that every student can benefit from the digitalization of education. 3. Apply data analysis models for academic data analysis. 4. Monitor, reflect and optimize the use of digital intelligence platforms and tools in education. 5. Use digital intelligence technologies or platforms for collaborative education at home, school and in society. 6. Guiding students to use AIGC for artistic practice. 7. Maintain network security in the teaching and learning process.

Table 18 (Continued)

70% learning through experience		
Module	Methods	Content/Activities
		subtotal hours: 30 hours
	Assignment (16.5 hours)	<ol style="list-style-type: none"> 1.Design an innovative digital teaching model. 2.Conduct course construction on the "Learning Pass". 3.Conduct academic assessment on the digital teaching platform. 4.AI-enabled courseware production 5.Analyse examination results using digital technology resources.
		subtotal hours: 18 hours
Module 4 Uphold fundamental principles and break new ground	Self-learning from practical work (9 hours)	<ol style="list-style-type: none"> 1.Transforming cutting-edge knowledge of disciplines and societal needs into teaching resources. 2. Innovate teaching methods. 3.Enriching teaching methods through the use of multimedia and digital tools. 4. Instructing students to participate in innovation and entrepreneurship contests or artistic creation contests. 5. Collaborate with scholars within and outside the discipline or companies to develop research programs. 6.Participate in the creative practice of art to serve society.
	Assignment (9 hours)	<ol style="list-style-type: none"> 1.Outstanding Case Study of Art Education in “uphold fundamental principles and break new ground”. 2. Reconstructing curriculum content based on a new view of knowledge. 3.Rethinking Teaching and Learning with a Change Orientation. 4.Promoting Digital Transformation Practices by means of Diffractive Thinking.

Table 18 (Continued)

70% learning through experience		
Module	Methods	Content/Activities
		subtotal hours: 18 hours
Module 5 Moral education ability	Self-learning from practical work (9 hours)	<ol style="list-style-type: none"> 1. Demonstrate good teacher ethics in the process of education and teaching. 2. Achieving good emotional management in the process of education and teaching. 3. Paying attention to students' emotional needs and establishing good teacher-student relationships. 4. Do a good job of program ideology in teaching and learning. 5. Designing challenging learning tasks to develop students' critical thinking skills. 6. Helping students to enhance their international perspective.
	Assignment (9 hours)	<ol style="list-style-type: none"> 1. Tapping into the moral education elements in teaching materials 2. Creating the theme of 'Building a strong sense of common themes for the Chinese nation'. 3. Organising students to reflect on their artistic creations 4. Guiding students to participate in social practice.
70% learning through experience		
Module	Methods	Content/Activities
Total		126 hours

(1) 20% Learning through others

Learning through others is a form of learning from other excellent art teachers, others experienced scholar, experts and so on, refers to learning and development through observing others, communicating with them, and receiving feedback. This includes communication, collaboration with colleagues, supervisors, and professionals, as well as observing others' successful experiences and practices. Through this approach, art teachers can acquire new insights, techniques, and methodologies, which they can then apply to their own work. the available methods of learning from others including coaching (18 hours) and job shadowing (18 hours), the details were showed at the table 19.

Table 19 Specific activities of 20% learning through others

20% learning through others		
Module	Methods	Content/Activities
subtotal hours: 6 hours		
Module1 Knowledge literacy	Coaching (3 hours)	1.Ways to improve professionalism. 2.Practical application of advanced teaching concepts. 3.Ways of breaking down professional barriers.
	Job Shadowing (3 hours)	1.Development of interdisciplinary collaborative research. 2. Diversified teaching methods 3.Observation and analysis of student learning and behavior.
Module 2 Didactic ability	Coaching (4.5 hours)	1.Observation and analysis of the learning situation. 2.Curriculum design and lesson plan writing. 3.Effective classroom management. 4.Teaching reflection and feedback.
	Job Shadowing (4.5hours)	1.Implementation and management of flipped classrooms. 2. Guidance and managing creative practice. 3. Skills in real-time academic assessment and feedback.

Table 19 (Continued)

20% learning through others		
Module	Methods	Content/Activities
subtotal hours: 9 hours		
Module 3 Digital literacy	Coaching (4.5 hours)	<ol style="list-style-type: none"> 1. Strategies for selecting and using digital technology resources. 2. Application of intelligent teaching assistants 3. Use of digital technology to assist classroom teaching 4. Visual presentation of academic data analysis results with the help of digital tools and rational interpretation.
	Job Shadowing (4.5 hours)	<ol style="list-style-type: none"> 1. Construction and application of digital educational resources. 2. Implementing blended teaching. 3. Collaborative teaching using information technology. 4. Digital academic evaluation and feedback.
Module 4 subtotal hours: 6 hours		
Module 4 Uphold fundamental principles and break new ground	Coaching (3 hours)	<ol style="list-style-type: none"> 1. Requirements of Teaching Innovation Competition and Guidance on Preparation for the Competition. 2. Declaration and Implementation of Industry-University-Research programs. 3. Innovative Talent Cultivation Methods.
	Job Shadowing (3 hours)	<ol style="list-style-type: none"> 1. Preparation for Teaching Innovation Competition. 2. AI-enabled Scientific Research.

Table 19 (Continued)

20% learning through others		
Module	Methods	Content/Activities
		subtotal hours: 6 hours
Module 5 Moral education ability	Coaching (3 hours)	1. Modes and methods of moral education. 2. Construction of “Course Ideological and Political Education” programs. 3. Pathways to “Three-wide Education”.
	Job Shadowing (3 hours)	1. Design and Implementation of Course Ideological and Political Education. 2. Moral education in creative practices. 3. Problem-oriented group collaborative learning model.
Total		36 hours

(2) 10% learning through courses.

Learning through courses refers to learning and development through formal training, courses, and learning activities. This includes participating in external training, company-internal training programs, reading books, attending seminars, and other means. Although this component accounts for a relatively small proportion, it still provides art teachers with certain theoretical learning and foundational knowledge. It took 18 hours by using formal training method. Specific arrangements are as shown in Table 20.



Table 20 Specific activities of 10% learn through courses

10% learning through courses		
Module	Methods	Content/Activities
subtotal hours: 3 hours		
Module1 Knowledge literacy	Training (3 hours)	The transformation of roles and the professional development of art educators within the context of the 'New Liberal Arts' paradigm.
subtotal hours: 3 hours		
Module 2 Didactic ability	Training (3 hours)	The integration of both online and offline instructional design and implementation competencies.
subtotal hours: 6 hours		
Module 3 Digital literacy	Training (6 hours)	Application of digital teaching tools, the acquisition and management of digital resources, and the optimization of curriculum design through digital technologies.
subtotal hours: 3 hours		
Module 4 Uphold fundamental principles and break new ground	Training (3 hours)	The “Changes” and “No Changes” in Art Education Innovation: The Scientific Connotation and Practical Path of “uphold fundamental principles and break new ground”.
subtotal hours: 3 hours		
Module 5 Moral education ability	Training (3 hours)	The Moral Education Function of Art Education in Colleges and university and the New Path of Moral Education.
Total		18 hours

3.6 Evaluation

Evaluation should be carried out throughout the program, at the beginning, middle and end of the program, in order to understand the gradual improvement of teachers' competence.

(1) Pre-Development Evaluation

Before program development, evaluation is crucial, which is related to the

feasibility and success of the program as well as the rationality of resource allocation. Before program development, the researcher assessed the current status of competence, training needs, required resources and expected effects of art teachers in Ningxia university. The evaluation methods mainly used questionnaires and interviews. Questionnaires were used to collect information about art teachers' self-evaluation of their competence and training needs in Ningxia colleges and university. Interviews were conducted with teachers to gain an in-depth understanding of their training needs and expectations, and with school management to understand the school's specific requirements for teacher competency. Based on the results of the evaluation, a targeted training program was developed to clarify the training objectives, content, mode and time, and to provide a scientific basis for the development of an effective program to enhance the competence of art teachers in Ningxia colleges and university.

(2) Development Evaluation

During the implementation of the program, the effectiveness of the training should be dynamically evaluated. The following evaluation methods are mainly adopted:

Behavioral observations: Observation records are kept of teachers' performance in the training, including participation, interaction and practical skills.

Reflective logs: Teachers are encouraged to write reflective logs of their teaching to understand their self-perception and actions for improvement in the teaching process.

Interviews: Communication with participating teachers during the implementation of the program in order to assess in real time their learning experiences, gains as well as problems and difficulties.

(3) Post-Development Evaluation

The post-development evaluation is an assessment of competence behavior subsequent to the utilization of the competence enhancement program. In order to ensure the comprehensiveness and effectiveness of the evaluation, it should be centred on multi-dimensional core indicators. It is necessary to compare the objectives set by the program with the actual performance of teachers after the training, so as to test the actual effectiveness of the training. Post-Development Evaluation is conducted using

the competence measurement form and satisfaction questionnaire with five level evaluation: evaluate participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge or skills and participants' satisfaction.

Table 21 The assessments methods adopted at the different stages of the program

Stages		Evaluation methods
Pre-Development		-Questionnaires -Interviews
Development	-Self-learning from practical work -Assignment	-Reflective logs -Interviews
	-Coaching -Job Shadowing	-Behavioral observations -Reflective logs
	-Training	-Testing
Post-Development	-Self-learning from practical work	-Measurement -Interviews
	-Assignment -Coaching	-Satisfaction questionnaires
	-Training	-Measurement -Satisfaction questionnaires

3.7 Revised and improved the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

The researcher created a program draft to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia based on a synthesis of all the findings of the study, and had the program evaluated by five experts.

The researcher revised and improved the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia from two aspects according to the experts' suggestion.

Summarizing the experts' opinions, the researcher found that the experts emphasized two aspects of revision:

(1) The duration of the program implementation is relatively long and should be appropriately shortened. 150 hours is more appropriate, so that teachers have time to reflect on what they have learned. Moreover, ensure that the module of “uphold fundamental principles and break new ground” will be slightly more focused

on formal training time, because “uphold fundamental principles and break new ground” is not only a competence, but also the basic principle of the development of higher education in China, and it is necessary to clarify the theoretical knowledge of its scientific connotation, dialectical relationship and scientific pathway.

(2) The project implementation process should be further refined. The development process is separated according to the 70:20:10 framework, so that the development path will be clearer.

The researcher revised the program draft based on the expert opinions as follows:

(1) Adjust the total duration of program implementation and the duration of each component.

The total duration of the program implementation was reduced from 180 hours to 150 hours, with a duration of 5 hours per day over a period of 30 days, with the following time allocation: the time for experiential learning(70%) was reduced from 126 hours to 105 hours, the time for learning from others(20%) was reduced from 36 hours to 30 hours, and the time for learning through formal training(10%) was reduced from 18 hours to 15 hours. The time allocated to each of the five modules was 30 hours for knowledge literacy, 35 hours for didactic ability, 40 hours for digital literacy, 23 hours for moral education ability, and 22 hours for uphold fundamental principles and break new ground. In addition, on the basis of the overall principle of 70:20:10, the time spent on formal training was increased appropriately in the module of uphold fundamental principles and break new ground, and although the total time spent on the uphold fundamental principles and break new ground was reduced from 27 to 22 hours, the time spent on formal training remained unchanged at 3 hours. The second is to implement the program in three steps based on the 70:20:10 framework. The revised program implementation plan tables are as follows table 22.

Table 22 Specific activities of 70% learning through experience (revised)

Components	Principle	Methods	Hours
Knowledge literacy	70% learning through experience	Self-learning from practical work Assignment	21
	20% learning through others	Coaching Job shadowing	6
	10% learning through courses	Formal training	3
Subtotal			30
Didactic ability	70% learning through experience	Self-learning from practical work Assignment	25
	20% learning through others	Coaching Job shadowing	7
	10% learning through courses	Formal training	3
Subtotal			35
Digital literacy	70% learning through experience	Self-learning from practical work Assignment	28
	20% learning through others	Coaching Job shadowing	8
	10% learning through courses	Formal training	4
Subtotal			40
Uphold fundamental principles and break new ground	70% learning through experience	Self-learning from practical work Assignment	15
	20% learning through others	Coaching Job shadowing	4
	10% learning through courses	Formal training or lecture	3

Table 22 (Continued)

Components	Principle	Methods	Hours
Subtotal			22
Moral education ability	70% learning through experience	Self-learning from practical work Assignment	16
	20% learning through others	Coaching Job shadowing	5
	10% learning through courses	Formal training	2
Subtotal			23
Total			150

(2) The development process has been adjusted from two steps to 3 steps as follows:

Step 1, designated the Training Intensive. The module Digital literacy with 4 hours, the module Moral education ability with 2 hours, and the remaining three modules each comprising 3 hours, total in 15 hours, corresponds to 10% learning through courses.

Step 2, designated learning through others with coaching (14 hours) and job shadowing (16 hours) in educational institutions, total in 30 hours, corresponds to 20% learning through others.

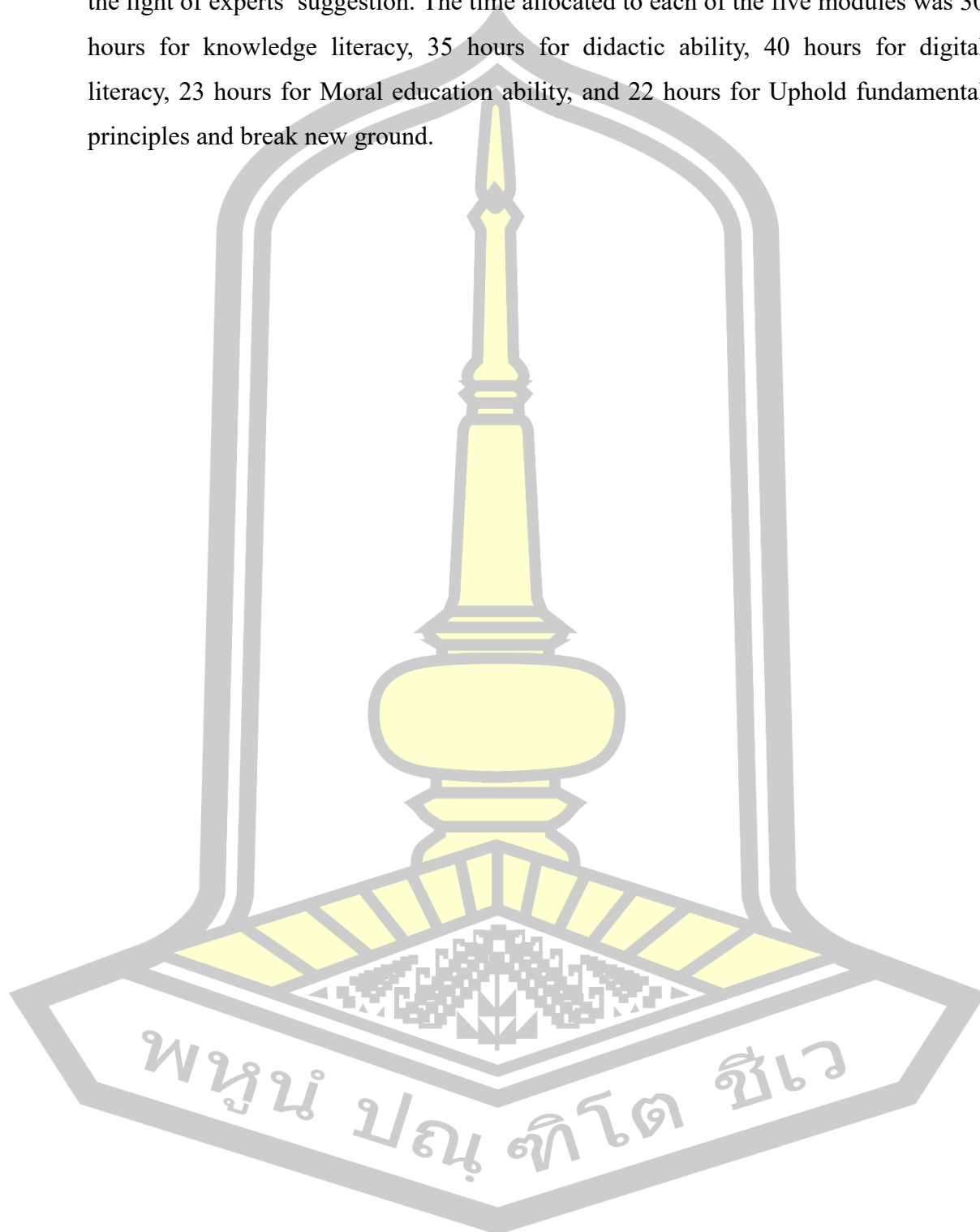
Step 3, designated learning through teaching practice with Self-learning from practical work (56 hours) and Assignment (49 hours) in educational institutions, total in 105 hours. corresponds to 70% learning through experience. The process plan for program implementation as follows tables 23.

Table 23 The process plan for program implementation (revised)

Content		Time (hours)	Media	Undertaker
Step1 Training Intensive (15 hours)				
Knowledge literacy		3	-Intelligent classroom -PPT -knowledge handbook	Experts Art teachers
Didactic ability		3		
Digital literacy		4		
Uphold fundamental principles and break new ground		3		
Moral education ability		2		
Process 2 Learning through others with coaching and job shadowing in educational institutions (30 hours)				
Coaching	Knowledge literacy	3	-diary notes -knowledge handbook	Coach Art teachers
	Didactic ability	3		
	Digital literacy	4		
	Uphold fundamental principles and break new ground	2		
	Moral education ability	2		
Job shadowing	Knowledge literacy	3		
	Didactic ability	4		
	Digital literacy	4		
	Uphold fundamental principles and break new ground	2		
	Moral education ability	3		
Process 3 Learning through teaching practice within educational institutions (105 hours)				
Self-learning from practical work	Knowledge literacy	12	-diary notes -knowledge handbook	Art teachers
	Didactic ability	13		
	Digital literacy	15		
	Uphold fundamental principles and break new ground	8		
	Moral education ability	8		
Assignment	Knowledge literacy	9		
	Didactic ability	12		
	Digital literacy	13		
	Uphold fundamental principles and break new ground	7		
	Moral education ability	8		
total	150 (hours)			

The analysis of needs indicated that the order of priority need index modified (PNImodified) for all 5 components rank as the follows, the first, Digital literacy, the second, Didactic ability, the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground.

The time allocation for the five content modules of the program has been revised in the light of experts' suggestion. The time allocated to each of the five modules was 30 hours for knowledge literacy, 35 hours for didactic ability, 40 hours for digital literacy, 23 hours for Moral education ability, and 22 hours for Uphold fundamental principles and break new ground.



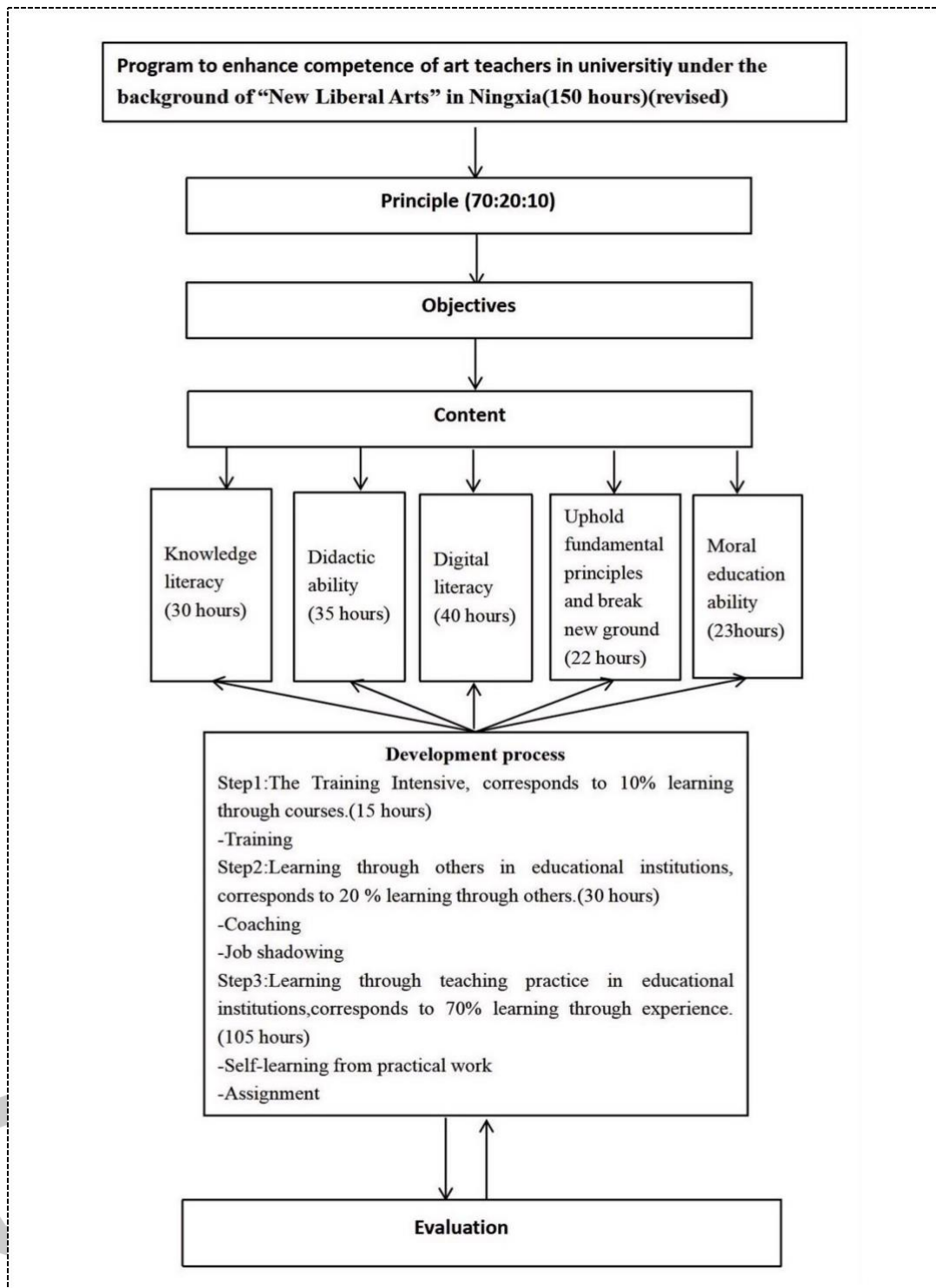


Figure 8 Program to enhance competence of art teachers in university under the background of "New Liberal Arts" in Ningxia (revised)

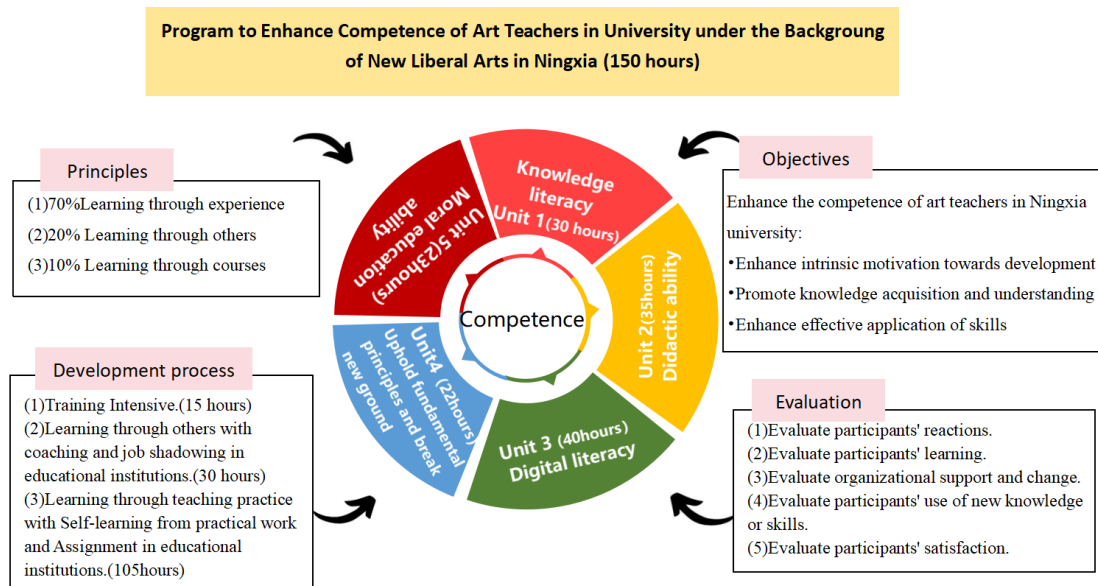


Figure 9 Relationship diagram of the program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia

In order to show the content of the program more clearly and to facilitate its implementation, the specific activities of each module will be shown in detail one by one below. According to the personnel development model 70:20:10, the 70% is experiential learning (105 hours), 20 % is learn from others (30 hours), and 10% is learning through the formal education (15 hours).

(1) Specific activities of 70% learning through experience(revised)

Experiential learning is a form of learning, accumulating experience through practical operation and daily work, refers to learning and development through challenging work tasks. These tasks typically involve solving practical problems, program management, and daily job responsibilities. Art teachers accumulate experience and learn new knowledge and skills in the process of solving actual problems. the suitable methods for on job learning are self-learning from practical work (56 hours) and assignment (49 hours), the details were showed at the table 24.

Table 24 Specific activities of 70% learning through experience (revised)

70% learning through experience		
Module	Methods	Content/Activities
subtotal hours: 21 hours		
Module1 Knowledge literacy	Self-learning from practical work (15 hours)	<ol style="list-style-type: none"> 1.To pursue the frontiers of the discipline and improve the professional theoretical level. 2. To practice the concept of art education in the context of "new liberal arts". 3. To explore the teaching path of multidisciplinary intersection and integration. 4. Participate in interdisciplinary research collaboration. 5. Analyze the psychology of student learning. 6. Practice General Secretary Xi Jinping's important ideas on education.
	Assignment (12 hours)	<ol style="list-style-type: none"> 1. Analysis of the application of cutting-edge knowledge in various academic disciplines. 2. Analysis of excellent cases of cross-disciplinary and integrated teaching. 3. Demonstration and sharing of the effectiveness of arts education in the context of the “New Liberal Arts”. 4. Learning advanced education concepts and methods.
subtotal hours: 25 hours		
Module 2 Didactic ability	Self-learning from practical work (15 hours)	<ol style="list-style-type: none"> 1. Improve course design. 2. Integrate or develop intelligent teaching resources through information technology. 3. Implement student-centred teaching and classroom management. 4. Dynamically grasp students' learning needs. 5. Conduct comprehensive and scientific academic assessment of students. 6. Constructively summaries and reflect on teaching.
	Assignment (15hours)	<ol style="list-style-type: none"> 1. Complete the revision of the syllabus and lesson plans of the OBE teaching concept. 2. Construct a scientific evaluation system combining quantitative and qualitative evaluation. 3. Designing programs to stimulate student participation in the classroom. 4. Designing personalized teaching strategies 5. Organize reporting on course outcomes.

Table 24 (Continued)

70% learning through experience		
Module	Methods	Content/Activities
subtotal hours: 28 hours		
Module 3 Digital literacy	Self-learning from practical work (16.5 hours)	<ol style="list-style-type: none"> 1. Utilize digital teaching platforms for curriculum design and teaching activities. 2. Use digital technology resources for individualized teaching to ensure that every student can benefit from the digitalization of education. 3. Apply data analysis models for academic data analysis. 4. Monitor, reflect and optimize the use of digital intelligence platforms and tools in education. 5. Use digital intelligence technologies or platforms for collaborative education at home, school and in society. 6. Guiding students to use AIGC for artistic practice. 7. Maintain network security in the teaching and learning process.
	Assignment (16.5 hours)	<ol style="list-style-type: none"> 1. Design an innovative digital teaching model. 2. Conduct course construction on the "Learning Pass". 3. Conduct academic assessment on the digital teaching platform. 4. AI-enabled courseware production 5. Analyze examination results using digital technology resources.
subtotal hours: 15 hours		
Module 4 Uphold fundamental principles and break new ground	Self-learning from practical work (9 hours)	<ol style="list-style-type: none"> 1. Transforming cutting-edge knowledge of disciplines and societal needs into teaching resources. 2. Innovate teaching methods. 3. Enriching teaching methods through the use of multimedia and digital tools. 4. Instructing students to participate in innovation and entrepreneurship contests or artistic creation contests. 5. Collaborate with scholars within and outside the discipline or companies to develop research programs. 6. Participate in the creative practice of art to serve society.
	Assignment (9 hours)	<ol style="list-style-type: none"> 1. Outstanding Case Study of Art Education in "uphold fundamental principles and break new ground". 2. Reconstructing curriculum content based on a new view of knowledge. 3. Rethinking Teaching and Learning with a Change Orientation. 4. Promoting Digital Transformation Practices by means of Diffractive Thinking.

Table 24 (Continued)

70% learning through experience		
Module	Methods	Content/Activities
		subtotal hours: 16 hours
Module 5 Moral education ability	Self-learning from practical work (9 hours)	<ol style="list-style-type: none"> 1. Demonstrate good teacher ethics in the process of education and teaching. 2. Achieving good emotional management in the process of education and teaching. 3. Paying attention to students' emotional needs and establishing good teacher-student relationships. 4. Do a good job of program ideology in teaching and learning. 5. Designing challenging learning tasks to develop students' critical thinking skills. 6. Helping students to enhance their international perspective.
	Assignment (9 hours)	<ol style="list-style-type: none"> 1. Tapping into the moral education elements in teaching materials 2. Creating the theme of 'Building a strong sense of common themes for the Chinese nation'. 3. Organizing students to reflect on their artistic creations 4. Guiding students to participate in social practice
Total		105 hours

(2) Specific activities of 20% learning through others (revised)

Learning from other is a form of learning from other excellent art teachers, other experienced scholar, experts and so on , refers to learning and development through observing others, communicating with them, and receiving feedback. This includes communication, collaboration with colleagues, supervisors, and professionals, as well as observing others' successful experiences and practices. Through this approach, art teachers can acquire new insights, techniques, and methodologies, which they can then apply to their own work. the available methods of learning from others including coaching (14 hours) an job shadowing (16 hours), the details were showed at the table 25.

Table 25 Specific activities of 20% learning through others (revised)

20% learning through others		
Module	Methods	Content/Activities
Module 1 Knowledge literacy	subtotal hours: 6 hours	
	Coaching (3 hours)	1. Ways to improve professionalism. 2. Practical application of advanced teaching concepts. 3. Ways of breaking down professional barriers.
	Job Shadowing (3 hours)	1. Development of interdisciplinary collaborative research. 2. Diversified teaching methods 3. Observation and analysis of student learning and behavior.
Module 2 Didactic ability	subtotal hours: 7 hours	
	Coaching (3 hours)	1. Observation and analysis of the learning situation. 2. Curriculum design and lesson plan writing. 3. Effective classroom management. 4. Teaching reflection and feedback.
	Job Shadowing (4 hours)	1. Implementation and management of flipped classrooms. 2. Guidance and managing creative practice. 3. Skills in real-time academic assessment and feedback.
Module 3 Digital literacy	subtotal hours: 8 hours	
	Coaching (4 hours)	1. Strategies for selecting and using digital technology resources. 2. Application of intelligent teaching assistants 3. Use of digital technology to assist classroom teaching 4. Visual presentation of academic data analysis results with the help of digital tools and rational interpretation.
	Job Shadowing (4 hours)	1. Construction and application of digital educational resources. 2. Implementing blended teaching. 3. Collaborative teaching using information technology. 4. Digital academic evaluation and feedback.
Module 4 Uphold fundamental principles and break new ground	subtotal hours: 4 hours	
	Coaching (2 hours)	1. Requirements of Teaching Innovation Competition and Guidance on Preparation for the Competition. 2. Declaration and Implementation of Industry-University-Research programs. 3. Innovative Talent Cultivation Methods.
	Job Shadowing (2 hours)	1. Preparation for Teaching Innovation Competition. 2. AI-enabled Scientific Research.

Table 25 (Continued)

20% learning through others		
Module	Methods	Content/Activities
subtotal hours: 5 hours		
Module 5 Moral education ability	Coaching (2 hours)	1. Modes and methods of moral education. 2. Construction of “Course Ideological and Political Education” programs. 3. Pathways to “Three-wide Education”.
	Job Shadowing (3 hours)	1. Design and Implementation of Course Ideological and Political Education. 2. Moral education in creative practices. 3. Problem-oriented group collaborative learning model.
Total		30 hours

(3) Specific activities of 10% learning through courses (revised)

Learning through formal education is a form of learning focusing on formal focused training, through courses or courses already prepared. It took 15 hours by using formal education method. Specific arrangements are as shown in table 26.

Table 26 Specific activities of 10% learning through courses (revised)

10% learning through courses		
Module	Methods	Content/Activities
subtotal hours: 3 hours		
Module1 Knowledge literacy	Training (3 hours)	The transformation of roles and the professional development of art educators within the context of the 'New Liberal Arts' paradigm.
	subtotal hours: 3 hours	
Module 2 Didactic ability	Training (3 hours)	The integration of both online and offline instructional design and implementation competencies.
	subtotal hours: 4 hours	
Module 3 Digital literacy	Training (4 hours)	Application of digital teaching tools, the acquisition and management of digital resources, and the optimization of curriculum design through digital technologies.

Table 26 (Continued)

10% learning through courses		
Module	Methods	Content/Activities
Module 4	subtotal hours: 3 hours	
Uphold fundamental principles and break new ground	Training (3 hours)	The “Changes” and “No Changes” in Art Education Innovation: The Scientific Connotation and Practical Path of “uphold fundamental principles and break new ground”.
Module 5	subtotal hours: 2 hours	
Moral education ability	Training (2 hours)	The Moral Education Function of Art Education in Colleges and Universities and the New Path of Moral Education.
Total	15 hours	

Step 3: Results of evaluating the suitability and feasibility of the program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

The assessment process aimed to improve the suitability and feasibility of the competence development program for art teachers in Ningxia regional university, as shown in the table 27. The assessment was conducted by five experts.

Table 27 Mean and standard deviation of suitability and feasibility level of the program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia

Item	Suitability			Feasibility		
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level
1. Principles	4.60	0.49	highest	4.80	0.40	highest
2. Objectives	4.73	0.44	highest	4.60	0.61	highest

Table 27 (Continued)

Item		Suitability			Feasibility		
		\bar{x}	SD.	Level	\bar{x}	SD.	Level
3. Content	Knowledge literacy	4.60	0.49	highest	4.60	0.80	highest
	Didactic ability	4.80	0.40	highest	4.60	0.49	highest
	Digital literacy	4.60	0.49	highest	4.40	0.80	high
	Uphold fundamental principles and break new ground	4.80	0.40	highest	4.60	0.80	highest
	Moral education ability	4.60	0.49	highest	4.60	0.49	highest
	Subtotal	4.68	0.47	Highest	4.56	0.69	highest
4. Development Process		4.70	0.46	highest	4.8	0.40	highest
5. Evaluation	Pre-Development	4.80	0.40	highest	4.80	0.40	highest
	Development	4.60	0.49	highest	4.80	0.40	highest
	Post-Development	4.60	0.8	highest	4.60	0.49	highest
	Subtotal	4.67	0.59	highest	4.73	0.44	highest
Total		4.69	0.49	highest	4.66	0.58	highest

From the table 27 it was found that the suitability of the program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia were level overall at the highest ($\bar{x} = 4.69$). When considering each aspect, it was found that the suitability levels were ranked from highest to lowest as follows Objectives ($\bar{x} = 4.73$), Development Processes ($\bar{x} = 4.70$), Evaluation ($\bar{x} = 4.68$) and Content ($\bar{x} = 4.68$), and Principle ($\bar{x} = 4.6$).

The feasibility of the Program to enhance competence of art teachers in university in Ningxia were level overall at the highest ($\bar{x} = 4.66$). When considering each aspect, it was found that the suitability levels were ranked from highest to lowest as follows Principle ($\bar{x} = 4.8$) and Development Processes ($\bar{x} = 4.80$), Evaluation ($\bar{x} = 4.73$), Objectives ($\bar{x} = 4.6$), and Contents ($\bar{x} = 4.56$).

CHAPTER V

CONCLUSION

The research on a program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia, the researcher summarized the results of data analysis, discussed the results, and made suggestions, as follows:

1. Research objectives
2. Research results
3. Discussion
4. Suggestions

Research Objectives

1. To investigate the components of competence of art teachers in university under the background of “New Liberal Arts”.
2. To explore existent state, desired state, and priority needs of the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.
3. To Create a program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Research Results

The entire results of this research are reported according to the research questions sequence as follows:

Phase 1: Investigating the components of the competence of art teachers in university under the background of “New Liberal Arts”.

There are 5 components of the competence of art teachers in university under the background of “New Liberal Arts”. The results of the suitability evaluation by the five qualified experts were generally at the highest level. The order of the average components from highest to lowest was 1) Uphold fundamental principles and break new ground ($\bar{x} = 4.88$), 2) Moral education ability ($\bar{x} = 4.87$), 3) Didactic ability and Digital literacy ($\bar{x} = 4.83$), 5) Knowledge literacy ($\bar{x} = 4.83$).

Phase 2: Exploring existent state, desired condition, and the priority needs of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

The results summarize the existent state of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Overall, it is presented at a medium level ($\bar{x} = 3.37$). Have the ideal conditions to improve the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. The desired state of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia were level overall at the highest ($\bar{x} = 4.57$). The Priority need index modified of the competence of art teachers in university under the background of “New Liberal Arts ” in Ningxia From most to the lowest: Digital literacy, Didactic ability, Knowledge literacy, Moral education ability, and the last Uphold fundamental principles and break new ground. The adjusted demand index value was 0.397, 0.392, 0.382, 0.307, 0.300.

Phase 3: Creating a program to enhance the competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

The results found that the program includes 1) principles, 2) objectives, 3) Content, including 5 modules: knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground, moral education ability, 4) Development process: step 1, designated the Training Intensive, total in 15 hours, corresponds to 10% learning through courses; step 2, designated learning through others with coaching (14 hours) and job shadowing (16 hours) in educational institutions, total in 30 hours, corresponds to 20% learning through others; step 3, designated learning through teaching practice with Self-learning from practical work (56 hours) and Assignment (49 hours) in educational institutions, total in 105 hours, corresponds to 70% learning through experience. 5) Evaluation of the program, The results of evaluating the suitability and feasibility of the program were highest

Discussion

From the research Program to enhance competence of art teachers in university under the background of “New Liberal Arts”, the researcher discussed the results as follows:

1. The components of competence of art teachers in university under the background of “New Liberal Arts”.

A comprehensive study of the research literature on teacher competence in colleges and university and policy documents related to higher education in China was conducted, with reference to the opinions of five experts. The study concluded that the competence of art teachers in Chinese colleges and university in the context of the “New Liberal Arts” consists of five components: 1) knowledge literacy, 2) didactic ability, 3) digital literacy, 4) uphold fundamental principles and break new ground, 5) Moral education ability. The evaluation results showed that the above five components of art teacher competence had the highest level.

Because competences are a combination of knowledge, skills and attitudes; knowledge is composed of the concepts, facts and figures, ideas and theories which are already established, and support the understanding of a certain area or subject; skills are defined as the ability to carry out processes and use the existing knowledge to achieve results, and attitudes describe the disposition and mindset to act or react to ideas, persons or situations. (the European Commission, 2019) Focusing on the concept of "New Liberal Arts", new requirements and challenges are put forward for university art teachers. Teachers' personal and professional characteristics are crucial to students' learning, adapting to the social requirements of the times, and acquiring skills for future development. knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground and moral education ability are the key competence for art teachers to be called high-performance teachers in the “New Liberal Arts education reform. The current university model in a market-driven and knowledge-based society entails a change in the teachers' roles. The prevailing narrative sustains a competence-based approach in higher education, considering that quality education implies that teachers in this context must have personal, research and pedagogical skills that enable them to perform their teaching function effectively. (Maria, Alfredo Moreira et al.,2023). Teaching effectiveness is still associated with a comprehensive set of knowledge, skills, and attitudes reflected in teacher performance and their reflection. (Velandia Rodriguez, C.A., & Mena-Guacas, A.F., 2022) As in other highly competitive and demanding work environments, teaching in higher education requires a complex set of personal and professional capabilities, including

vital educational capabilities, which are essential to providing high-quality teaching. Teachers should be able to manage various types of knowledge. The ability of art teachers to translate strategies, integrate knowledge and skills through reflective practice had been a significant turning point (Caena, F., & Redecker, C., 2019) For the successful implementation of “New Liberal Arts” skills practices. Art teachers are required to be activators of meaningful learning, not just facilitators, and they should be creative in choosing strategies that can be mixed and adjusted according to the context and learners. Catalyze meaningful learning and increase student motivation. This technology-driven learning has the potential to cultivate participants who are creative and cooperative in a knowledge-based, interdependent world. Digital competence has gained a strong prominence in the educational context, being one of the key competencies that teachers must master in today’s society. (Basilotta-Gómez-Pablos, Verónica, et al., 2022) Digital competences in teaching are a concept that is becoming increasingly essential as a requirement for teachers at all levels of schooling, regardless of the area of performance, the type of school, or the role played in the educational and pedagogical context. This is because all trends point to the use of digital technologies (in relation to, among other possible activities, searching for information, computer security, dissemination purposes, and creating or curating materials) that enable information to be processed, stored, and disseminated. (Velandia Rodriguez, C. A., Mena-Guacas, A.F., 2022) In addition, Art teachers should encourage students to take responsibility globally and encourage them to respect different cultures, be open to cooperation, and observing common values. (Gümüs, Arife., 2022)

Which is according the concept of “Declaration on the Construction of New Liberal Arts” (2020), it is pointed out that the construction of New Liberal Arts must adhere to uphold fundamental principles and break new ground. It asserts that innovation in inheritance is an indispensable requirement for the advancement and evolution of liberal arts education. Moreover, it emphasizes that the integration of modern information technology into liberal arts education is both the content and the method for achieving a self-revolution and innovation in this educational domain. A consensus has been reached on digital literacy and the ability to uphold fundamental principles and break new ground as the core competence of Chinese college teachers.

Which is according the concept of Lu Xiaoyan & Wang Donglan, (2023) who explored the construction of a high-quality development system for the new liberal arts. The study pointed out that how to create emerging disciplines whose disciplinary ecology is not yet mature in the process of maintaining integrity and innovation, and promote the renewal and upgrading of traditional liberal arts based on talent needs, has become an important issue currently facing teachers in colleges and universities in my country. 1) Art teachers should focus on the long-term development of students and the cultivation of high-level thinking, integrate knowledge + ability + quality, cultivate applied, compound and innovative new liberal arts talents, lay a solid foundation for general knowledge, professional foundation and basic knowledge of natural sciences, cultivate students' integrated disciplinary thinking, and cultivate students' knowledge, ability, morality and comprehensive quality. 2) promoting the combination of science and technology and humanities and exploring the new liberal arts course construction paradigm are the inevitable trends of future course development. However, when appropriately using science and technology information technology to assist in teaching to promote the effectiveness of liberal arts education, the teaching concept of liberal arts must not be abandoned. 3) College teachers should take advantage of the situation, take innovative research as the leading factor, accelerate the promotion and implementation of applied research on excellent traditional Chinese culture, and strive to integrate excellent traditional Chinese culture with modern technology, so as to give birth to new cultural forms.

Which is according the concept of Liu Qinghong (2022), who proposed a competence model for college teachers comprising five aspects: 1) didactic skills, 2) knowledge literacy, 3) personality charm, 4) work attitude and values, and 5) teaching motivation.

Which is according the concept of Klaassen, C. A. (2002), who pointed that attention to values and norms is a “must” and teaching without this only works to the educational disadvantage of the students as such teaching provides the moral foundation needed to achieve other (cognitive) objectives. In their view, teachers need to (re) learn and (re)establish a relevant pedagogical language in their daily work by reshaping their schools into pedagogical and moral communities.

Which is according the concept of Du Yihang, Chi Xuefeng, & Pei Yan (2020) studied the competence quality of digital media art teachers in colleges and university. The results of the research found that the competence qualities of art teachers in colleges and university include 1) teacher ethics, 2) didactic ability, 3) knowledge reserve, 4) information technology ability and 5) non-technical skills.

2. The priority needs of competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

Based on the magnitude of the PNImodified values, the order of development priorities can be determined, and the prioritization of needs is useful in guiding the development of programs to enhance the competence of art teachers in higher education and helps to better allocate resources and time in the program development process. By ranking for the priority needs, the results showed that Digital literacy as the first priorities for the program of enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia. Digital literacy has the largest PNImodified value, indicating that in terms of digital literacy, the current actual situation of art teachers as a sample has the largest discrepancy with the ideal state.

Because may be that there is a large contradiction between conceptual awareness and pedagogical implementation, and in practice, many teachers lack the internal drive to effectively integrate digital technologies into the classroom due to the constraints of traditional concepts and inertial thinking, as well as the fear of digital technologies. On the one hand, according to the questionnaire data, the average value of the existing conditions of digital literacy is the lowest among the competence components of university art teachers, indicating that digital competence is the weakest. On the other hand, the advent of the era of digital and functional teaching, and the new requirements for teachers' digital literacy put forward by the "new liberal arts" teaching reform, have made art teachers realize the necessity and urgency of improving their own digital literacy. Many college teachers' practice of digital literacy improvement stays at the level of simply learning and mastering technology, ignoring the deep logic and value of the technology behind the change in teaching and learning, and weakening the potential of the technology to change the way students learn. (Mei Bing, 2024). However, most teachers recognize the great potential and role of digital technology in teaching in the new era, and have the awareness to

improve their digital literacy. (Feng Baowei, & Li Xiaoyue, 2024) Under the current digital education ecology, digital anxiety is widespread among college teachers, which mainly stems from the asynchrony between the speed of technology iteration and teachers' individual adaptability. This mismatch not only reflects the difference between technological updates and teachers' learning ability, but also reveals the deep-seated incongruity between educational concepts, teaching methods, and technological applications. (Huang Daozhu, & Zhang Meijuan, 2024)

Which is according to the concept of Ye Xiaoni (2024), who studied the competence of university teachers in 'two-line blended teaching', and the results showed that the scores of indicators related to digital information technology were relatively low, such as the lowest mean value of micro-video production in the composition of skills, and the lowest mean value of knowledge of educational technology in the composition of knowledge, which indicates that the digital literacy of teachers needs to be improved. However, in terms of personal attributes, 'teaching and reflection' scored the highest, with 60% of the teachers exploring and applying innovation in 'dual-line blending', indicating that teachers have a strong willingness to update their teaching concepts, actively accept the impact and changes brought about by new technologies, and actively learn and try out new teaching models. This shows that teachers are more willing to update their teaching concepts, actively accept the impact and changes brought by new technologies, and actively learn and try new teaching modes.

Which is according to Cuan Lihan (2023), who studied the digital literacy of university teachers, and the results showed that although a high percentage of teachers have a clearer perception of the importance of information technology in education, information knowledge is still a challenge for the development of digital literacy among university teachers. Many of them can only do simple processing of teaching resources, and the application of digital intelligent technology is low, especially the ability to integrate with teaching disciplines is low.

Which is according to the concept of Gümüş, Arife (2022), who explained that the way the digital world presents information, and especially the huge impact of artificial intelligence (AI) technologies on all information processes, has created a new learning environment. This learning environment, which points to a specific

spatiality in the current educational literature, has acquired a new dimension in the digital world. The relationship between information technology and education is actually a reflection of education in the whole society. Faced with education, today's students become the first choice for a new way of learning called digital learning. Teachers' confidence in information and communication technology (ICT) should enable them to effectively integrate it into learning and teaching. They need to be able to guide and help students discover and create knowledge in the network.

Which is according the concept of Basilotta-Gómez-Pablos, Verónica, et al. (2023), who explained that since the beginning of the millennium, a real digital revolution has indeed taken place, and higher education must be prepared to cope with the demands of the digital society we live in and be able to anticipate the demands of the future society. This requirement means that higher education needs to adapt to social changes, and this requirement extends to university teachers, who, as an inherent part of the university, must face and respond to social challenges, changes that have already occurred and those that are about to come. Teachers are aware of this challenge as part of their work, and digital literacy has become one of the key competencies that teachers must master in today's society. Teachers recognize that they have a low or medium–low digital competence, as well as the absence of certain competencies, especially those related to the evaluation of educational practice. Despite the multiple studies that address this issue, it is necessary to continue improving research in this area, deepening the assessment of teachers' digital competencies and design, on this basis, more practical and personalized training programs that respond to the needs of teachers in the digital era.

3. Creating a program to enhance competence of art teachers in university under the background of “New Liberal Arts” in Ningxia.

3.1 The program to enhance competence of art teachers in university under the background of “New Liberal Art” in Ningxia, consisting of principles, objectives, content, development process, and evaluation.

Because a program means a plan, program, and a set of activities that show details of the development approach or the enhancement to develop or enhance the target group to meet the set goals. There is a systematic process in the implementation of various operations, with activities that have a specific time frame, curriculum, and

content. The program is a development system that mentions the competence of art teachers. It is a teaching system that conforms to adult learning and a training system developed according to the planned objectives of improving the competence of art teachers in the context of the "New Liberal Arts". Therefore, the program should be guided by measurable objectives that meet the needs of art teachers, follow appropriate development principles, design scientific activity content, and integrate measurement and evaluation throughout the program to ensure the high suitability and feasibility of the program and achieve the purposefulness of program implementation.

Which is according the concept of Pariya Meesuk (2009), who designed a participatory teacher professional development program consisting of 9 components: 1) Problem, 2) conditions, 3) objectives, 4) time structure, 5) Qualifications of program participants, 6) content used, 7) documents used, 8) learning management in the program, 9) and program evaluation.

Which is according the concept of Suwat Julsuwan (2011), who mentioned the components of the program that are important and necessary for educational management. Which will make the educational management more effective. The components include 1) the program objectives, 2) content, 3) process, and 4) evaluation.

Which is according the concept of Sonjai, S., & Junsuwan, S. (2018). The program for teacher development in Mathematics Learning Management to Promote Analytical Thinking Skills in Secondary School Students under the Office of Basic Education Commission comprised of the main elements as follow: 1) Goal and importance of the program, 2) Objective of the program, 3) Content of the program, 4) The developing of the program, and 5) The Assessment and evaluation of the program.

3.2 Developing competence for art teachers in university in Ningxia using the 70:20:10 Framework Principles.

In order to enhance the competence of art teachers in Ningxia university in the context of the 'New Liberal Arts', the program follows the 70:20:10 framework principle. In the program, the researchers followed a strict 70:20:10 ratio for the overall allocation of time and resources. However, the researchers did not strictly

follow this ratio in a single aspect of competency composition, but made appropriate fine-tuning according to actual needs.

Because the 70:20:10 framework principle emphasizes the integration of formal, experiential, and social learning, with 70% of learning occurring through on-the-job experiences, 20% through social interactions, and 10% through formal training. A large amount of existing practice and research has proved that training adults according to this principle has a good effect on the cultivation of knowledge and basic skills. As adults, university art teachers learning is characterized by its high level of purpose and autonomy, with a focus on experiential learning and practical application. Adult learners possess a strong sense of self-awareness and possess the capacity for independent learning. They are more likely to utilize experiential learning as a resource and to leverage interpersonal relationships to acquire knowledge and skills that have practical application value in real-world problem-solving. A mature 70:20:10 approach means placing learning at the core of the organization in a program to improve the competence of college art teachers, focusing learning on meeting the development needs of art teachers and how to better meet these needs.

Which according the concept of McCall Jr. et al., (1988), who comprising four separate studies of over 200 successful executives from six major corporations. Their data showed that challenging work experiences made up 70% of an executive's learning; 20% of their development occurred through relationships with other people and executive's bosses, and the remaining 10% of development occurred through formal training on learning, training, honing skills, and reading.

Which according the concept of Eduard C. Lindeman (1984), The resource of highest value in adult education is the learner's experience. Experience is the adult learner's living textbook. There are 4 principles that are applied to adult learning: 1) Adults need to be involved in the planning and evaluation of their instruction. 2) Experience (including mistakes) provides the basis for the learning activities. 3) Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life. 4) Adult learning is problem-centered rather than content-oriented.

Which is according the concept of Baldwin, T.T & Ford, J.K. (1988), who states the principle underlying the 70:20:10 framework that learning takes place

through combining formal, social, and experiential means, reflects the premise that for learning transfer to occur, individuals also need social and experiential support. As it combines three types of learning, the 70:20:10 framework could guide HRD practitioners to design learning and development programs that overcome transfer problems by ensuring that programs include structured experiential and social learning experiences.

Which is according to the concept of Samantha J. Johnson et al. (2018), Social support occurs through working with, and gaining support from, peers, as well as coaching and mentoring opportunities. And experiential support emerges from creating space to apply new skills and knowledge at work, with supervisory encouragement and feedback building employees' confidence to continuously apply the learning. In the formal, experiential, and social elements of the 70:20:10 framework should work together and not be undertaken in isolation.

Which is according to the concept of Robin, R. (2014), who presents 70:20:10 model in his research on blended learning for leadership The CCL approach. He defines leadership development as formal and informal with 10:90 ratio. The informal leadership development includes 70 percent learning from experience and practice, and 20 percent from encouragement and support from others. The other 10 percent is from formal learning such as education.

3.3 The program evaluation was found to be at the highest level of suitability and feasibility.

Evaluation should be carried out throughout the program, including pre-development evaluation, development evaluation in and post-development evaluation, in order to understand the gradual improvement of teachers' competence. In the pre-development diagnostic evaluation, the researchers assessed the competency development needs of art teachers in Ningxia's university in the context of the 'New Liberal Arts' and the implementation of the program, mainly through questionnaires and interviews. In the formative evaluation of the program development, the researchers used a combination of behavioral observations, reflective logs, interviews and tests to assess the program's 'organizational management' and 'trainee participation' indicators in a timely manner. The post-training summative evaluation

adopts the method of Measurement and Satisfaction questionnaires, which mainly includes ‘training effect’ and ‘post-training follow-up’.

Because these three stages together constitute the complete process of evaluation, and each stage has its own unique purpose and significance. The main purpose of pre-development is to determine the feasibility of the program, the rationality of goal setting, etc., which helps to ensure that the program has a clear direction and a solid foundation from the beginning. Needs analysis is the logical starting point for the implementation of teacher training activities, the core of which is whether the training is necessary or to provide baseline data for the evaluation of the effectiveness of program implementation. The development evaluation mainly focuses on the progress of the program, and can adjust the program plan in time, optimize resource allocation, and ensure that the program can proceed smoothly according to the predetermined goals and schedule. The main purpose of post-development evaluation is to evaluate the results and impact of the program and provide improvement experience for future programs.

Which is according the research of Zheng Lihai, & Shi Dawei (2014), Who states evaluate whether the implementation program is complete in terms of elements, instructive and operational. In the formative evaluation of the program development, the researchers used a combination of behavioral observations, reflective logs, interviews and tests to assess the program's ‘organizational management’ and ‘trainee participation’ indicators in a timely manner. The purpose of the training process evaluation is to adjust the training strategy based on the feedback of the trainees' knowledge mastery, training performance, and their views and opinions on the training, so as to improve the effectiveness of the training. The post-training summative evaluation adopts the method of Measurement and Satisfaction questionnaires, which mainly includes ‘training effect’ and ‘post-training follow-up’. The main components are ‘training effect’ and ‘post-training follow-up’. The training effect is evaluated in four dimensions: satisfaction, mastery, enhancement and improvement. Satisfaction rate includes the excellent rate of the instructors' evaluation and the overall satisfaction rate of the trainees. ‘Post-training tracking’ is to use the support of the training results to assess, supervise and promote the internalization and transfer of training concepts and knowledge to teaching skills.

Which is according the research of Li Baomin, & Yan Hanbing (2017). The study points out that quality assessment is integrated into the entire process before, during and after the implementation of the program. 1) Pre-training preparatory assessment: Conducting background assessment and input assessment. Teachers' learning needs are diagnosed through pre-training questionnaires and interviews. 2) Quality monitoring and assessment during training: process assessment is strengthened. Comprehensive monitoring of trainee learning activities and the participation of teaching assistants through student learning records, teaching records of teaching assistants, standardized test questions, etc. 3) Post-training quality assessment and summarization: result-oriented assessment. Post-training quality assessment mainly adopts different evaluation methods, such as evaluation forms, questionnaires, situation tests, summary reports, etc., to assess the learning effectiveness of the trainees, the effectiveness and satisfaction of the tutors, and to promote the training process, management, and training quality management as one through assessment. In the study, three evaluation principles were summarized: 1) combination of process and summative evaluation, 2) combination of qualitative and quantitative evaluation, and 3) combination of point and surface.

Which is according the concept of Prarasri, A., Chanawongse, A., & Tesaputa, K. (2018), who stated that the program development involves 4 stages: Stage 1: Plan. It included pre self-assessment and defining intended outcomes and objectives. Stage 2: Design. It included identifying or developing content for the issue/topic, developing the activities and plans for delivery. Stage 3: Implement. It included acting and conducting PLC process, and after action review. Stage 4: Measure. It included lesson learned and knowledge sharing. The evaluation of the entire program was conducted with 5 level assessments. The levels were participants' reaction, participants' learning, organization support and change, participants' use of new knowledge and skills, and participants' satisfaction.

Suggestions

1. Suggestions for applying the research results

1.1 The government should strengthen the infrastructure and laboratory construction of art teaching in Ningxia's colleges and university and equip them with modern educational and teaching equipment.

1.2 Education administrative departments should establish a diversified platform for peer support and collaborative learning to facilitate the exchange of experience and sharing of resources among teachers.

1.3 University should strengthen the construction of practical teaching environment to provide a professional platform for art teachers to improve their professional skills.

1.4 Art teachers in Ningxia university should strengthen their awareness of developing competence, update their concepts of art teacher education, and actively participate in training, independent practice and teaching reflection to improve their level of competence.

1.5 Build a specialized educational resource platform to provide quality teaching resources and courses.

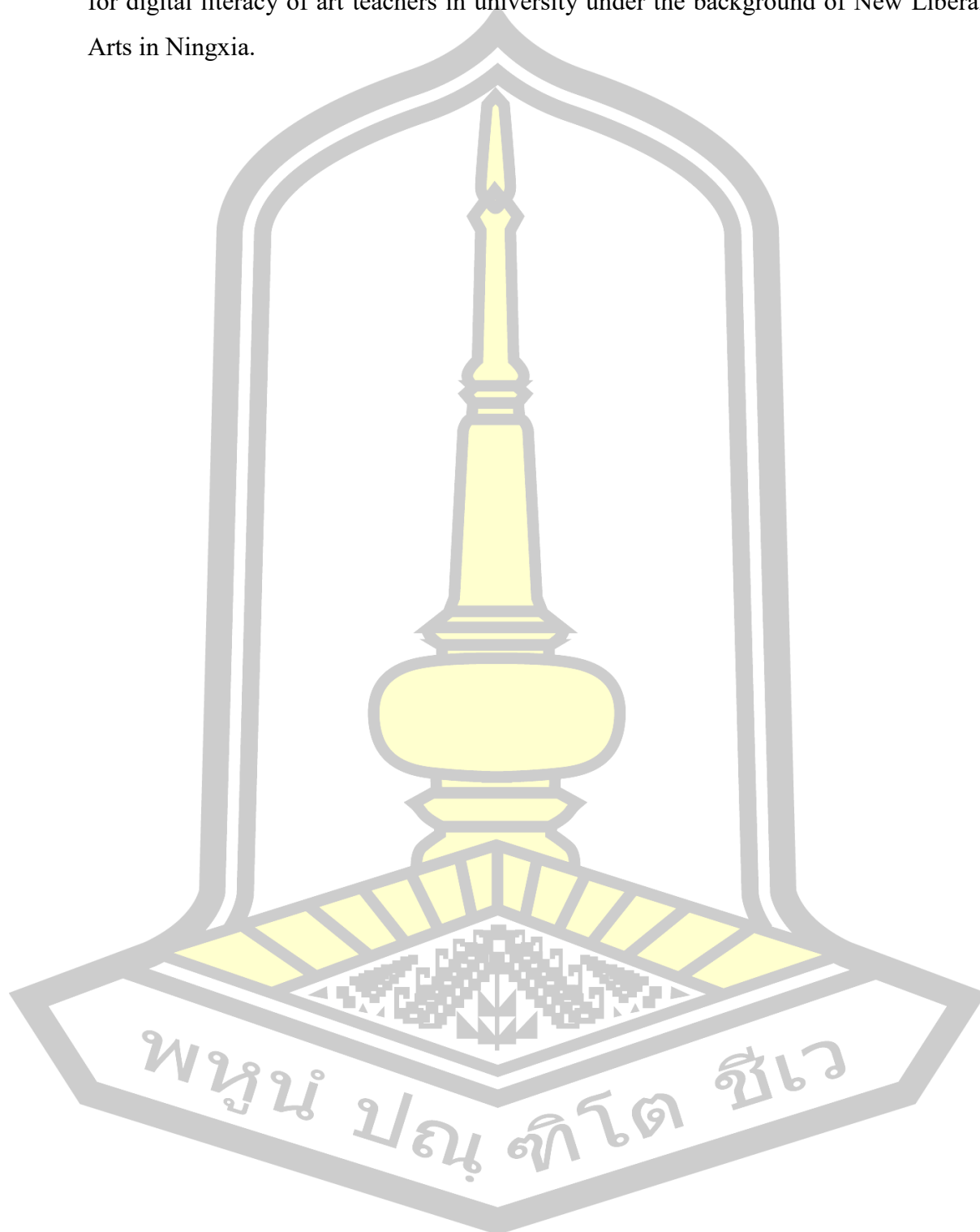
2. Suggestions for future research

2.1 From the research results it was found that the components of competence of art teachers in university includes knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground and moral education ability. Therefore, those interested in research issues related to development should conduct research on development to the competence model of university art teachers in the background of “New Liberal Arts”.

2.2 From the research results it was found that the components of competence of art teachers in university includes knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground and moral education ability. Therefore, those interested in research issues related to development should conduct research on development to the strategic system of enhance the competence of art teachers in Ningxia under the background of “New Liberal Arts”.

2.3 From the research results it was found that the order of priority need index modified, the first is digital literacy. Therefore, those interested in research

issues related to development should conduct research on development to strategies for digital literacy of art teachers in university under the background of New Liberal Arts in Ningxia.



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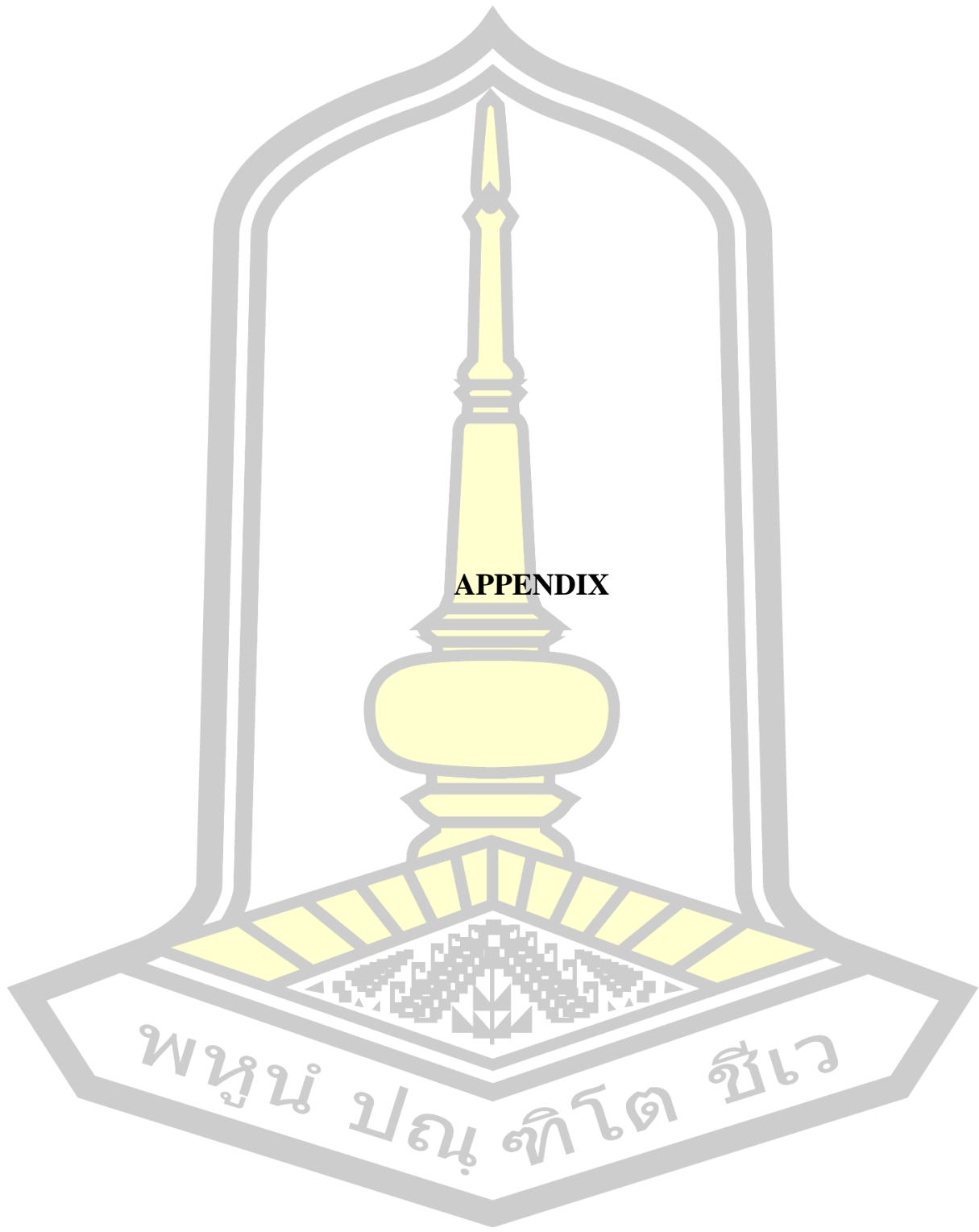
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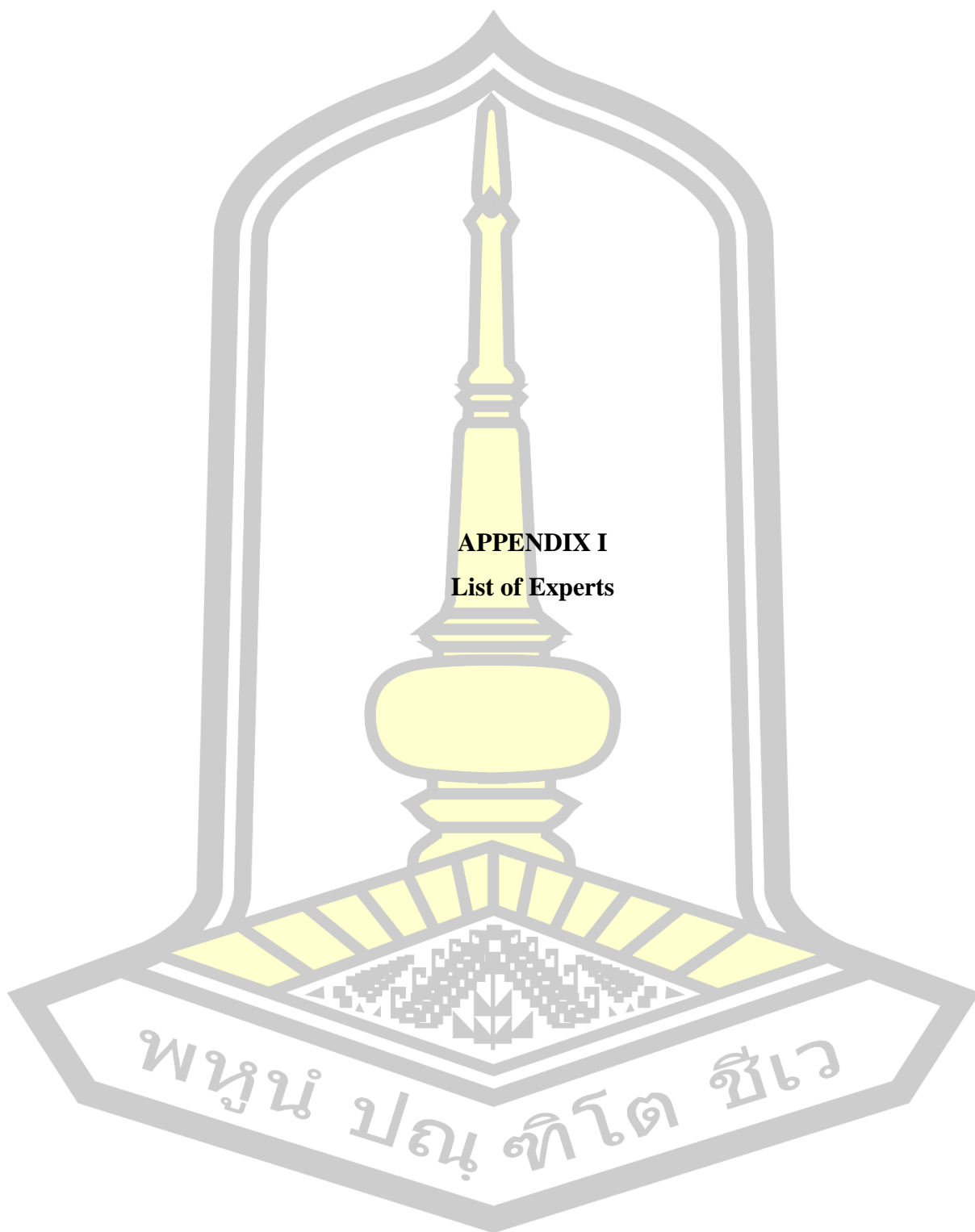
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APPENDIX

พหุจน์ ปณฺ ทิโต ชีเว



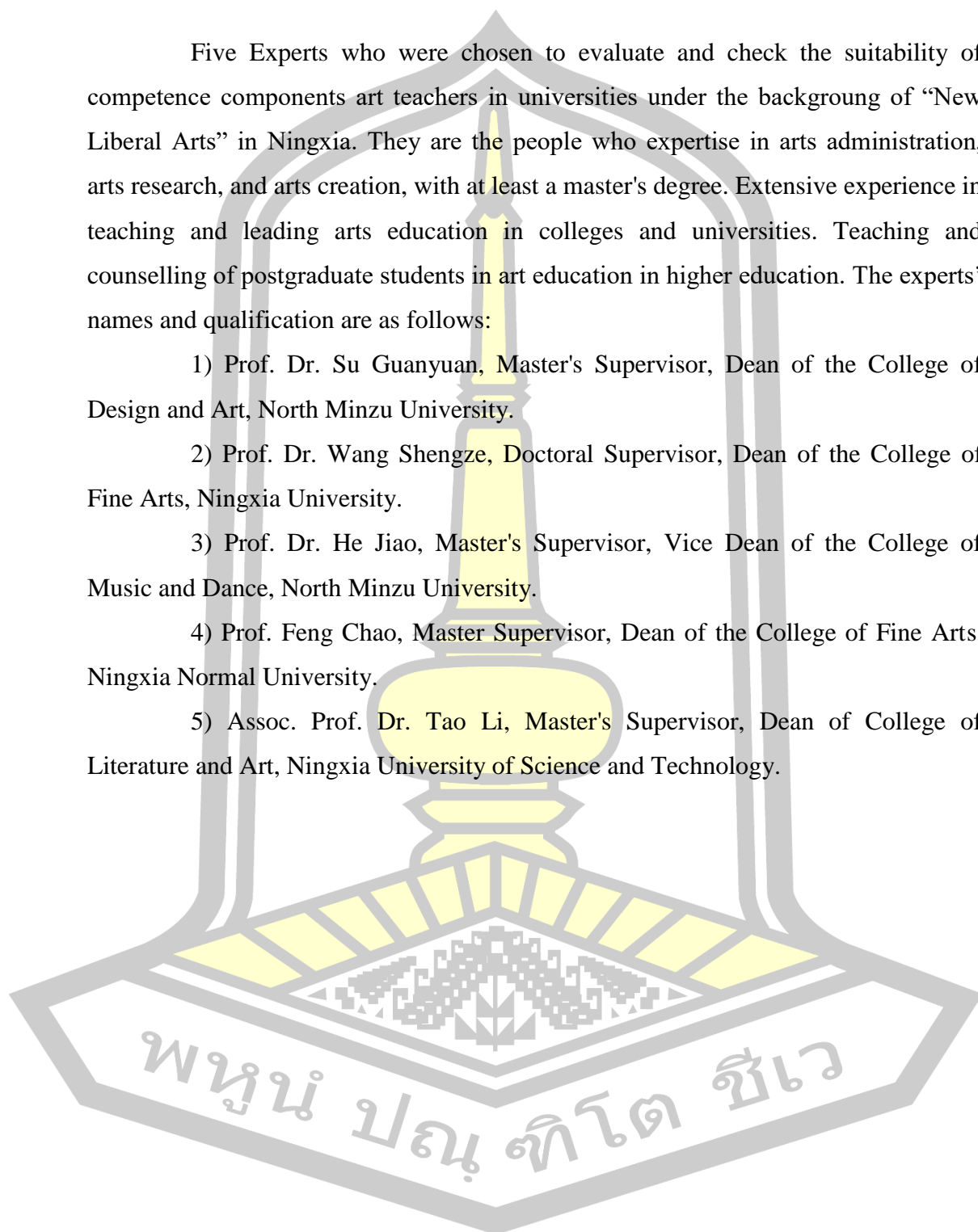
APPENDIX I
List of Experts

พหุมน์ ปณฺ ทิโต สีเว

List of experts to evaluate the competence component

Five Experts who were chosen to evaluate and check the suitability of competence components art teachers in universities under the background of “New Liberal Arts” in Ningxia. They are the people who expertise in arts administration, arts research, and arts creation, with at least a master's degree. Extensive experience in teaching and leading arts education in colleges and universities. Teaching and counselling of postgraduate students in art education in higher education. The experts’ names and qualification are as follows:

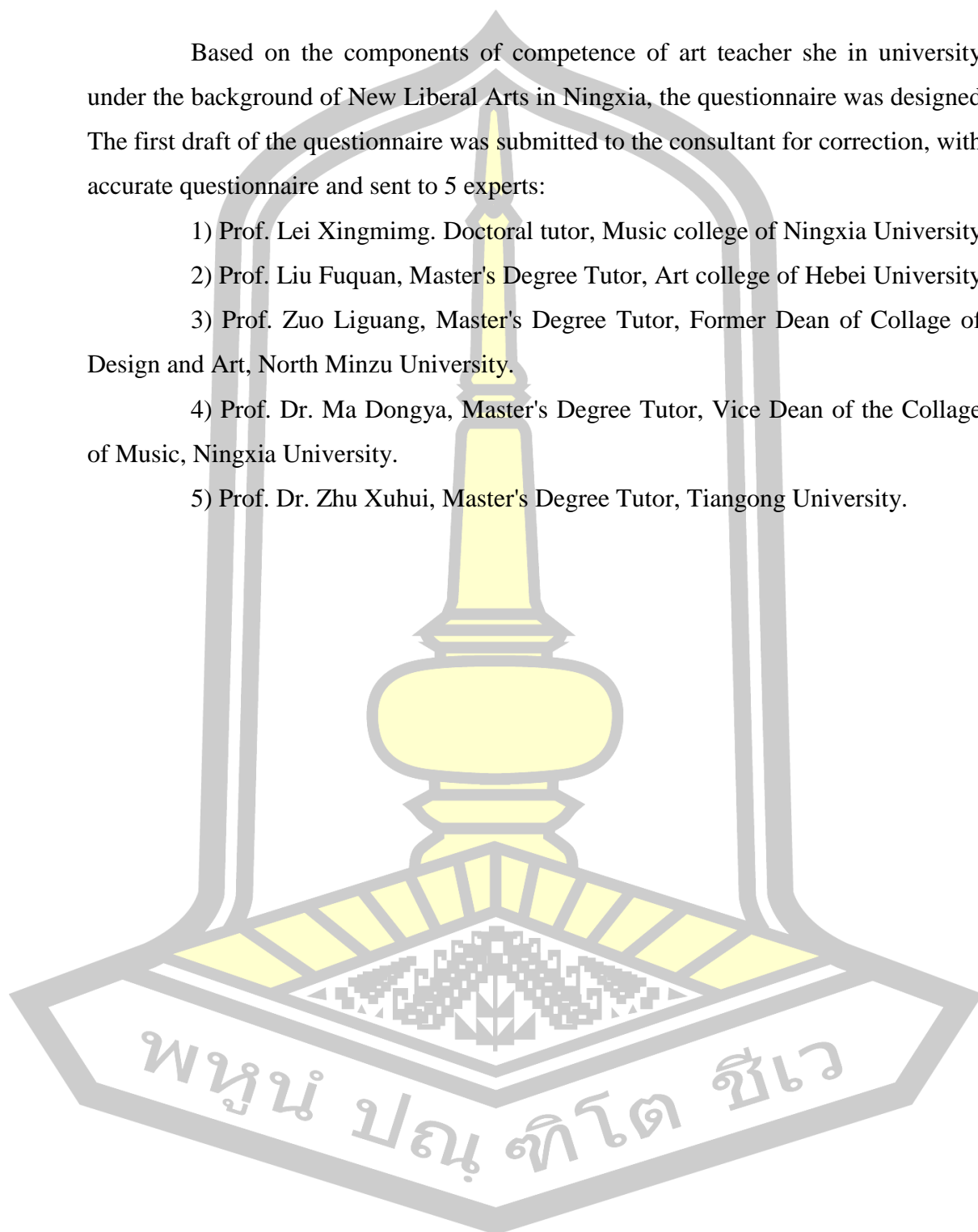
- 1) Prof. Dr. Su Guanyuan, Master's Supervisor, Dean of the College of Design and Art, North Minzu University.
- 2) Prof. Dr. Wang Shengze, Doctoral Supervisor, Dean of the College of Fine Arts, Ningxia University.
- 3) Prof. Dr. He Jiao, Master's Supervisor, Vice Dean of the College of Music and Dance, North Minzu University.
- 4) Prof. Feng Chao, Master Supervisor, Dean of the College of Fine Arts, Ningxia Normal University.
- 5) Assoc. Prof. Dr. Tao Li, Master's Supervisor, Dean of College of Literature and Art, Ningxia University of Science and Technology.



List of experts to evaluate the research tools

Based on the components of competence of art teacher she in university under the background of New Liberal Arts in Ningxia, the questionnaire was designed. The first draft of the questionnaire was submitted to the consultant for correction, with accurate questionnaire and sent to 5 experts:

- 1) Prof. Lei Xingming. Doctoral tutor, Music college of Ningxia University.
- 2) Prof. Liu Fuquan, Master's Degree Tutor, Art college of Hebei University.
- 3) Prof. Zuo Liguang, Master's Degree Tutor, Former Dean of Collage of Design and Art, North Minzu University.
- 4) Prof. Dr. Ma Dongya, Master's Degree Tutor, Vice Dean of the Collage of Music, Ningxia University.
- 5) Prof. Dr. Zhu Xuhui, Master's Degree Tutor, Tiangong University.



List of experts participating in the interview

Create a program to enhance competence of competence of arts teachers in universities under the background of “New Liberal Arts” in Ningxia. In-depth interviews with 5 experts for studying the principles, methods and times for developing competence of art teachers. The experts' standards were as follows: 1) have expertise in the field of education and training educational management, educational research or educational psychology, with at least a doctoral degree. 2) experience in teaching and educational leadership. 3) teaching and advising postgraduate students in the above fields. The experts' names and qualification:

1) Prof. Dr. Wang Anquan, served as Dean of the College of Education and Vice Dean of the College of Teacher Education at Ningxia Normal University Director of the Pedagogical Branch of the Chinese Society of Education, Chief expert of the Education Think Tank of the Ningxia Hui Autonomous Region Government.

2) Prof. Dr. Hao Wenbin, Dean of the Faculty of Education at Shaanxi Normal University, Director of the Postdoctoral Mobile Station of Education, and Director of the Northwest Basic Education and Teacher Education Research Centre.

3) Prof. Dr. Li Yanping, Doctoral Supervisor, College of Education, Shaanxi Normal University.

4) Prof. Dr. Ding Fengqin, Doctoral Supervisor, College of Education, Ningxia University.

5) Prof. Dr. Wang Xihong, Master's Degree Supervisor, Dean of the Faculty of Educational Sciences, Ningxia Normal University.



List of experts to evaluate the suitability and feasibility of the program

The key informants were five experts, who had experiences in educational training field or organizing conferences, workshops or training courses was invited to evaluate the possibility and suitability of the program and gave some comments to develop the appropriate program to enhance the competence of arts teachers in universities under the background of “New Liberal Arts” in Ningxia. The experts’ standards were as follows: 1) Education: expertise in the field of education and training educational management, educational research or educational psychology, with doctoral degree. 2) Experience: experience in teaching and educational leadership. 3) Job position: teaching and advising postgraduate students in the above fields.

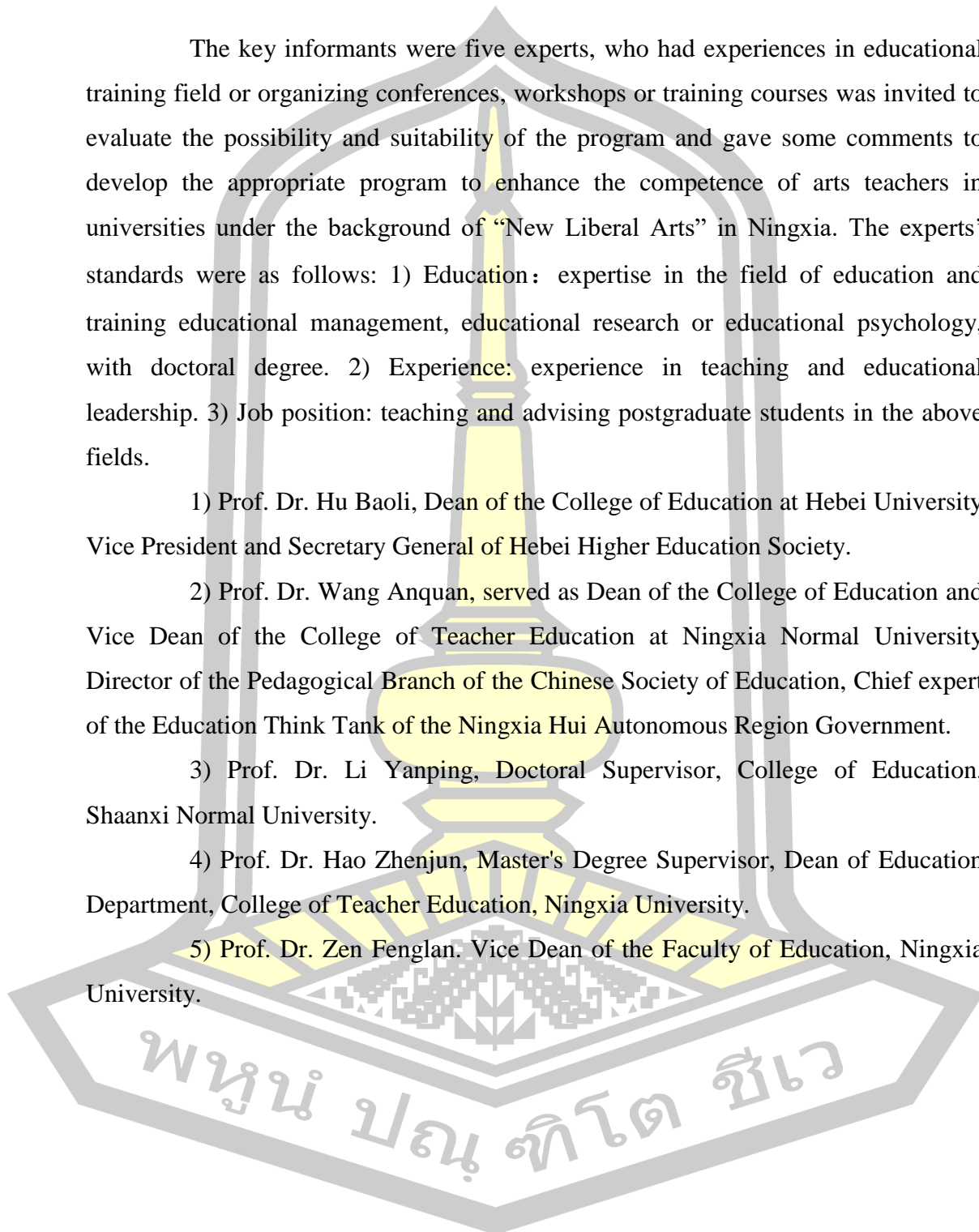
1) Prof. Dr. Hu Baoli, Dean of the College of Education at Hebei University, Vice President and Secretary General of Hebei Higher Education Society.

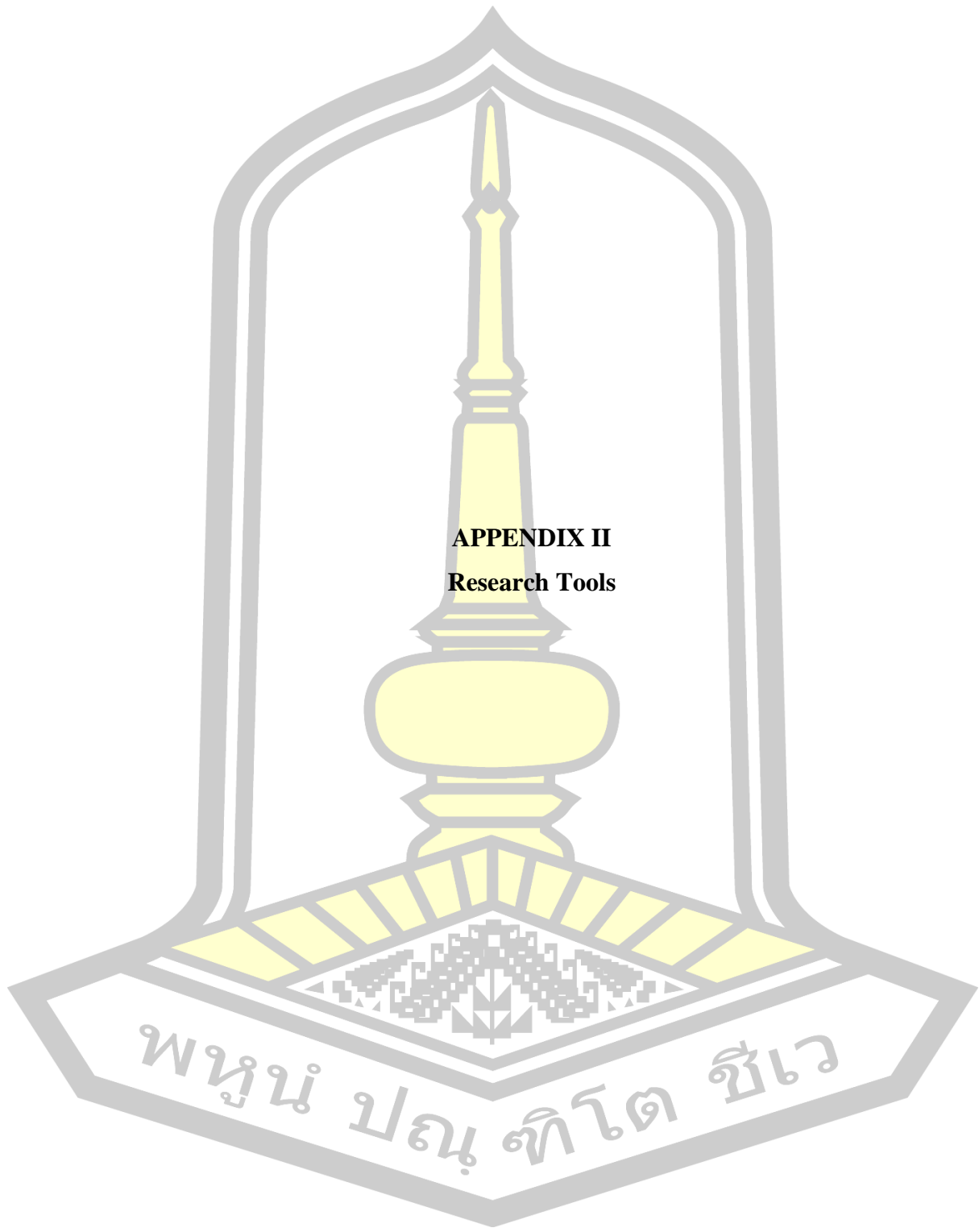
2) Prof. Dr. Wang Anquan, served as Dean of the College of Education and Vice Dean of the College of Teacher Education at Ningxia Normal University Director of the Pedagogical Branch of the Chinese Society of Education, Chief expert of the Education Think Tank of the Ningxia Hui Autonomous Region Government.

3) Prof. Dr. Li Yanping, Doctoral Supervisor, College of Education, Shaanxi Normal University.

4) Prof. Dr. Hao Zhenjun, Master's Degree Supervisor, Dean of Education Department, College of Teacher Education, Ningxia University.

5) Prof. Dr. Zen Fenglan. Vice Dean of the Faculty of Education, Ningxia University.





APPENDIX II
Research Tools

พหุณฺ์ ปณฺุ ทึโต สีเว



MAHASARAKHAM UNIVERSITY ETHICS COMMITTEE FOR
RESEARCH INVOLVING HUMAN SUBJECTS

Certificate of Approval

Approval number: 549-516/2024

Title : Program to Enhance Competence of Art Teachers in University under the Background of New Liberal Arts in Ningxia.

Principal Investigator : Baoyun Liu

Responsible Department : Faculty of Education

Research site : Yinchuan City, Ningxia Hui Autonomous Region, China

Review Method : Expedited Review

Date of Manufacture : 29 August 2024

expire : 28 August 2025

This research application has been reviewed and approved by the Ethics Committee for Research Involving Human Subjects, Mahasarakham University, Thailand. Approval is dependent on local ethical approval having been received. Any subsequent changes to the consent form must be re-submitted to the Committee.

Ratree S.

(Assistant Professor Ratree Sawangjit)
Chairman

Approval is granted subject to the following conditions: (see back of this Certificate)

Experts evaluation Form
The components of competence of art teachers in university under the
background of New Liberal Arts in Ningxia

Statement

1. Evaluation the suitability of the components of competence of art teachers in university under the background of New Liberal Arts in Ningxia, divided into 3 parts as follows:

Part 1. General information of expert.

Part 2. Evaluating the suitability of components of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Part 3. Suggestions regarding the components of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

The researcher hopes to receive your kindness, thank you very much.

Yours sincerely

Baoyun Liu

พหุบัณฑิตศึกษา

Part 1. General information of expert

1. Name

2. Position

Part 2. Evaluating the suitability of components of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Instructions, please check a mark enter in suitability fields. You have taken actions that suitability according to the following criteria:

- 5 means suitability at the highest level
- 4 means suitability at the high level
- 3 means suitability at the medium level
- 2 means suitability at the low level
- 1 means suitability at the lowest level

Orders	Component	suitability				
		5	4	3	2	1
1	Knowledge Literacy					
2	Didactic Ability					
3	Digital Literacy					
4	Uphold fundamental principles and Break new ground					
5	Moral education ability					

Part 3. Suggestions regarding the components of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

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Questionnaire

Research on the Program to Enhance Competence of art teachers in University under the background of New Liberal Arts in Ningxia

Statement

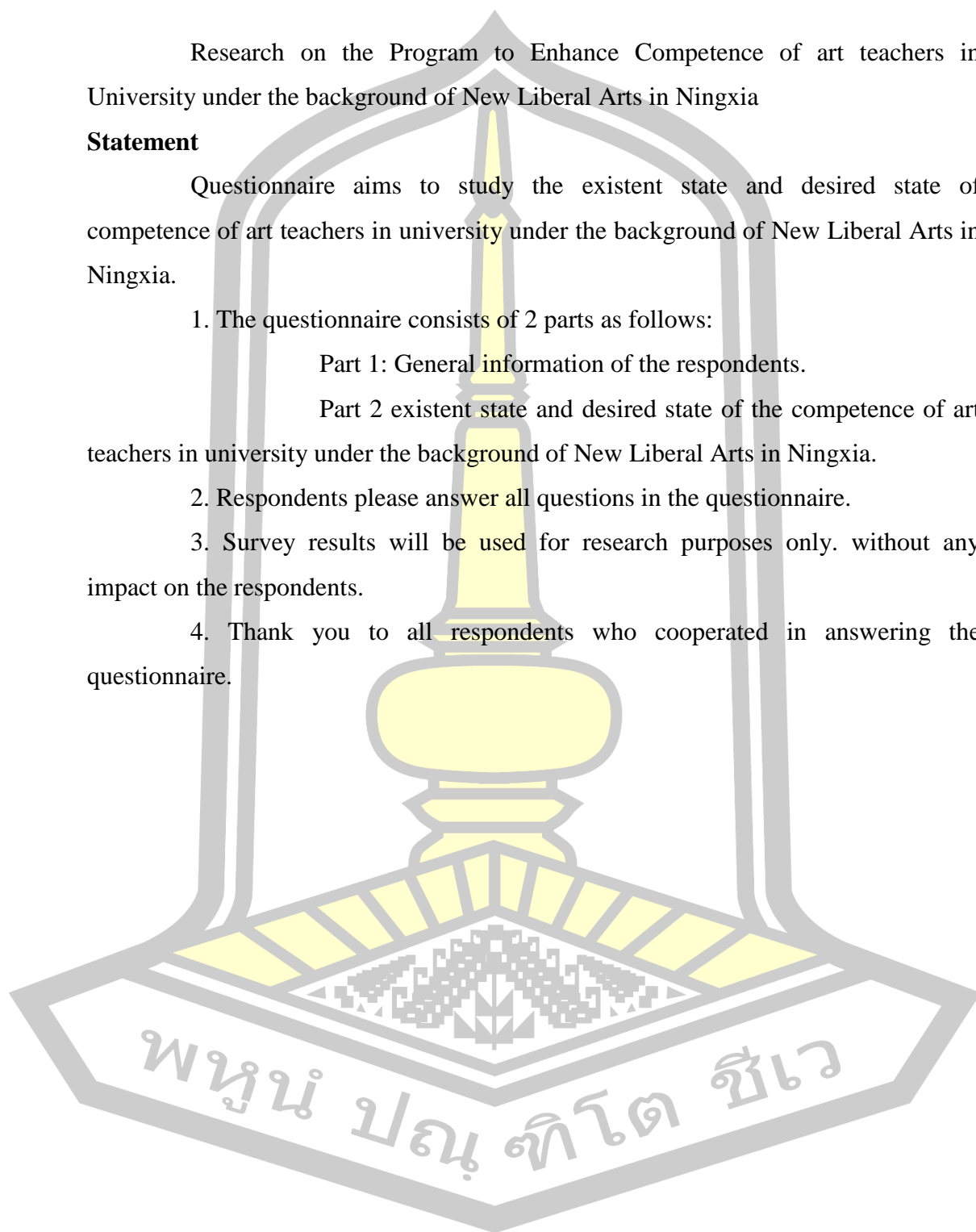
Questionnaire aims to study the existent state and desired state of competence of art teachers in university under the background of New Liberal Arts in Ningxia.

1. The questionnaire consists of 2 parts as follows:

Part 1: General information of the respondents.

Part 2 existent state and desired state of the competence of art teachers in university under the background of New Liberal Arts in Ningxia.

2. Respondents please answer all questions in the questionnaire.
3. Survey results will be used for research purposes only. without any impact on the respondents.
4. Thank you to all respondents who cooperated in answering the questionnaire.



Part 1 General information of the respondents

Explanation: This questionnaire is a questionnaire about personal characteristics. Please mark ✓ in that matches your status

1. Gender

- Male
 Female

2. Age

- Under 35 years old
 36 - 45 years old
 46 - 55 years old
 Over 56 years old

3. Position

- Art teacher and administrator
 Art teacher

4. Education level

- Bachelor's degree
 Master's degree
 Doctoral degree

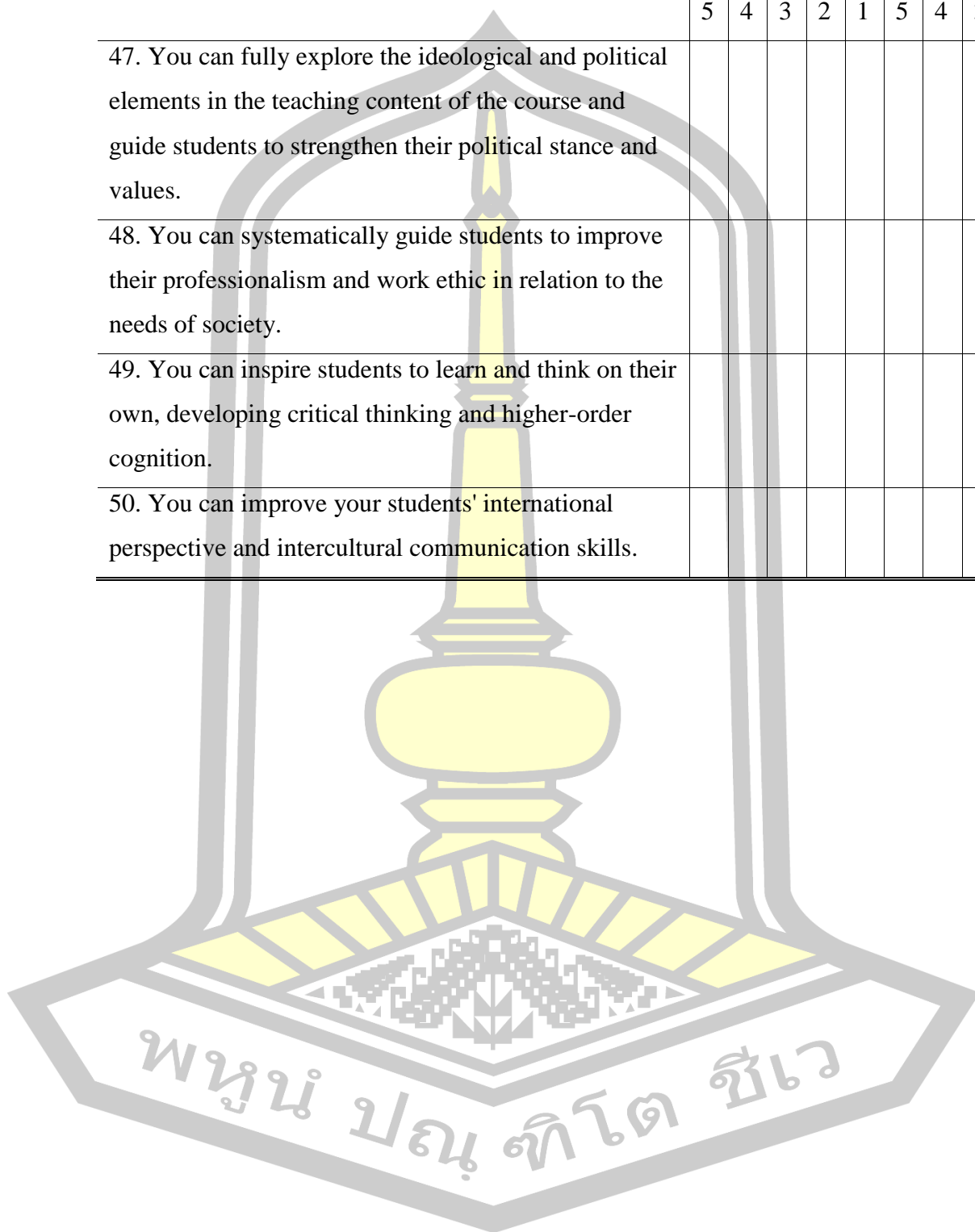
Part 2 Questionnaire regarding opinions regarding the existent state and desired state of the competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Instructions please check a mark, enter in the existent state and desired state fields. You have taken actions that existent state and desired state according to the following criteria:

- 5 means existent state and desired state at the highest level
 4 means existent state and desired state at the high level
 3 means existent state and desired state at the medium level
 2 means existent state and desired state at the low level
 1 means existent state and desired state at the lowest level

พหุบัณฑิตวิทยาลัย

Items	Existence state					Desired state				
	5	4	3	2	1	5	4	3	2	1
47. You can fully explore the ideological and political elements in the teaching content of the course and guide students to strengthen their political stance and values.										
48. You can systematically guide students to improve their professionalism and work ethic in relation to the needs of society.										
49. You can inspire students to learn and think on their own, developing critical thinking and higher-order cognition.										
50. You can improve your students' international perspective and intercultural communication skills.										



Interview form
Program to Enhance Competence of Art Teachers in University under the
background of New Liberal Arts in Ningxia

Statement

1. Interview form to interview for opinions about the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

2. The information obtained from the interview will be used as information to create a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

3. The interview form is divided into 2 parts as follows.

Part 1: General information of the interviewee.

Part 2: interview program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

The researcher hopes to receive your kindness, and thank you for this opportunity.

Yours sincerely

Baoyun Liu

พญูนุ่ ปญุ ทิโต ชีเว

Part 1: General information of the interviewee

1. Interviewee
2. Position
3. Date/month/year of the interview

Part 2: Program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia

From study of related documents and research principles of development competence of teachers. The researcher uses learning model principles consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses, and methods development of competence of teachers consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

How many opinions and suggestions do the experts have about the principles and methods of development?

1. Knowledge Literacy

1.1 Principles of development knowledge literacy consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses.

1.2 Methods of development knowledge literacy consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

1.3 Number of hour for development knowledge literacy.

1.4 Suggestion

2. Didactic Ability

2.1 Principles of development didactic ability consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses.

2.2 Methods of development didactic ability consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

2.3 Number of hour for development didactic ability.

2.4 Suggestion

3. Digital Literacy

3.1 Principles of development digital literacy consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses.

3.2 Methods of development digital literacy consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

3.3 Number of hour for development digital literacy.

3.4 Suggestion

4. Uphold fundamental principles and Break new ground

4.1 Principles of development the competence of uphold fundamental principles and break new ground consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses.

4.2 Methods of development the competence of uphold fundamental principles and break new ground consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

4.3 Number of hour for development uphold fundamental principles and break new ground.

4.4 Suggestion

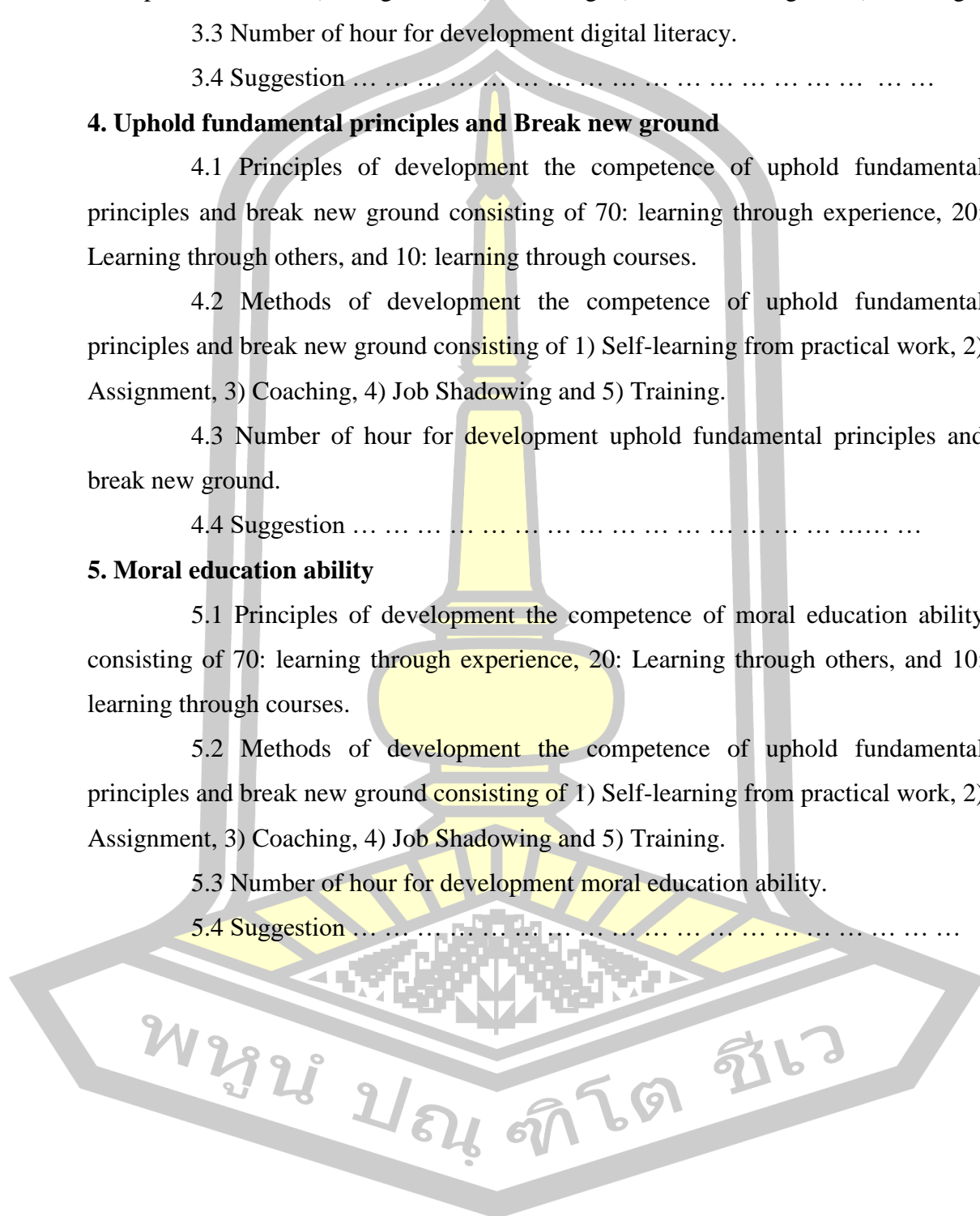
5. Moral education ability

5.1 Principles of development the competence of moral education ability consisting of 70: learning through experience, 20: Learning through others, and 10: learning through courses.

5.2 Methods of development the competence of uphold fundamental principles and break new ground consisting of 1) Self-learning from practical work, 2) Assignment, 3) Coaching, 4) Job Shadowing and 5) Training.

5.3 Number of hour for development moral education ability.

5.4 Suggestion



Program evaluation Form
Program to Enhance Competence of Art Teachers in University under the
Background of New Liberal Arts in Ningxia

Statement

1. Evaluation of suitability and feasibility of the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia divided into 2 parts as follows:

Part 1 General information of expert

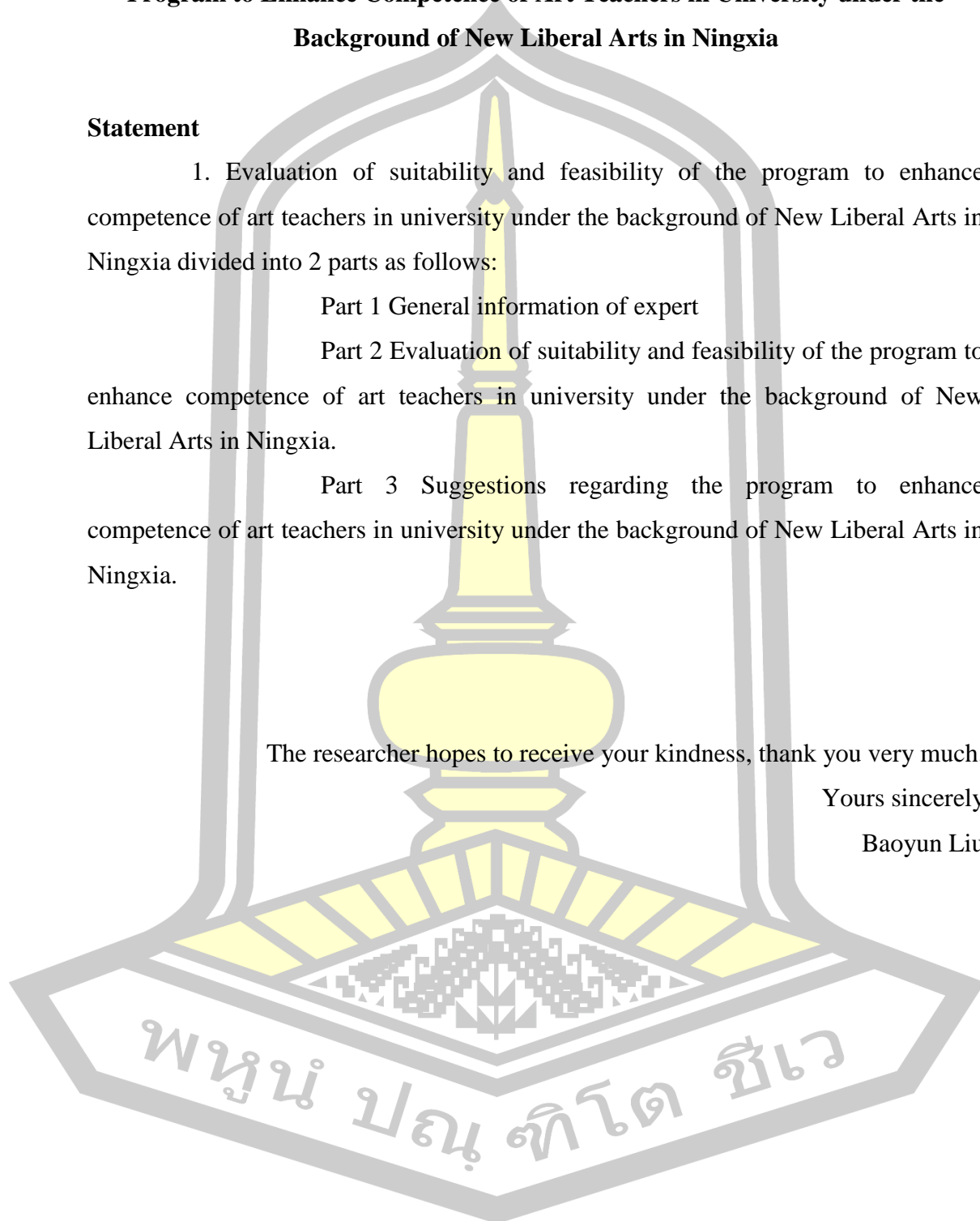
Part 2 Evaluation of suitability and feasibility of the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Part 3 Suggestions regarding the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

The researcher hopes to receive your kindness, thank you very much.

Yours sincerely

Baoyun Liu



Part 1 General information of expert

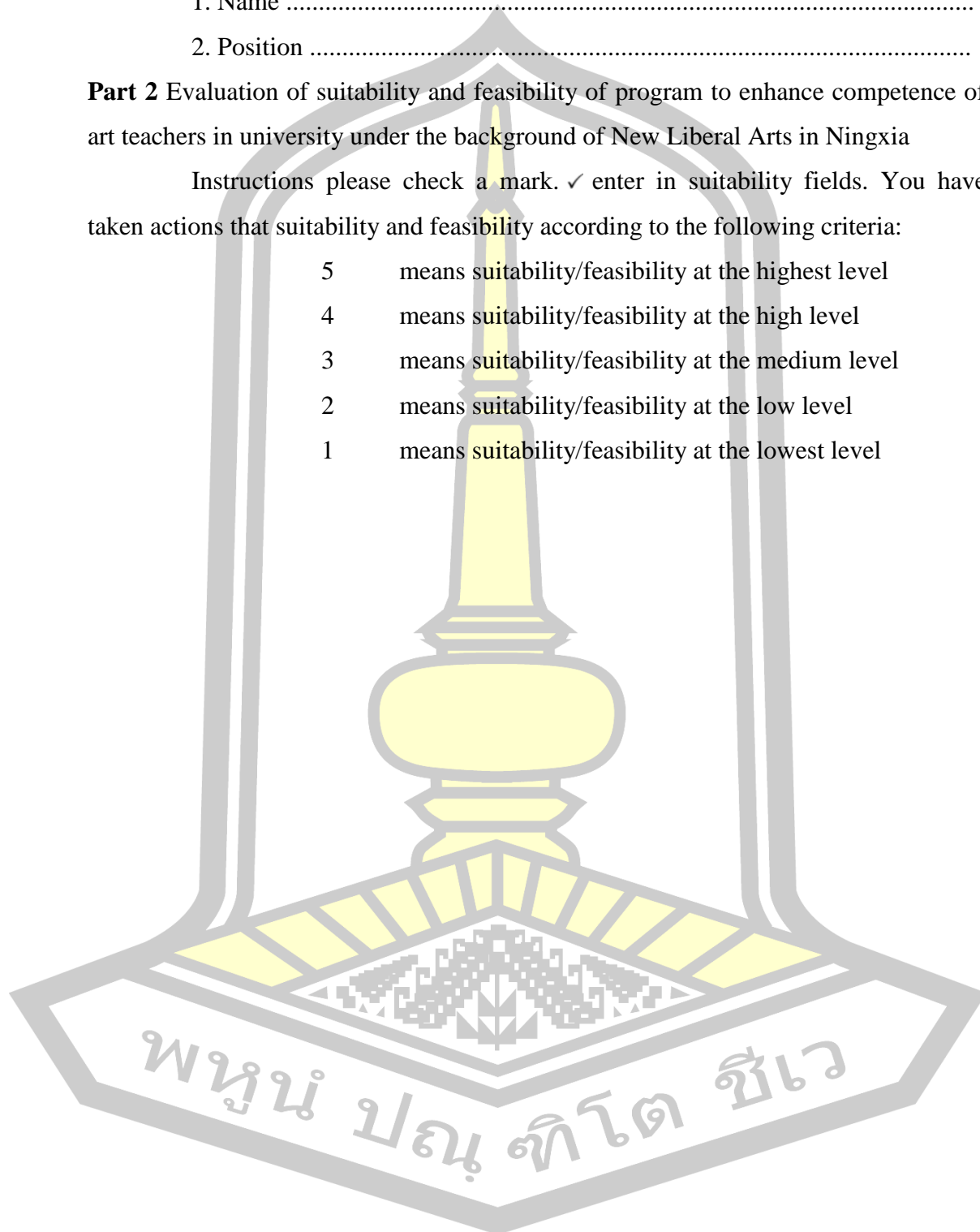
1. Name

2. Position

Part 2 Evaluation of suitability and feasibility of program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia

Instructions please check a mark. ✓ enter in suitability fields. You have taken actions that suitability and feasibility according to the following criteria:

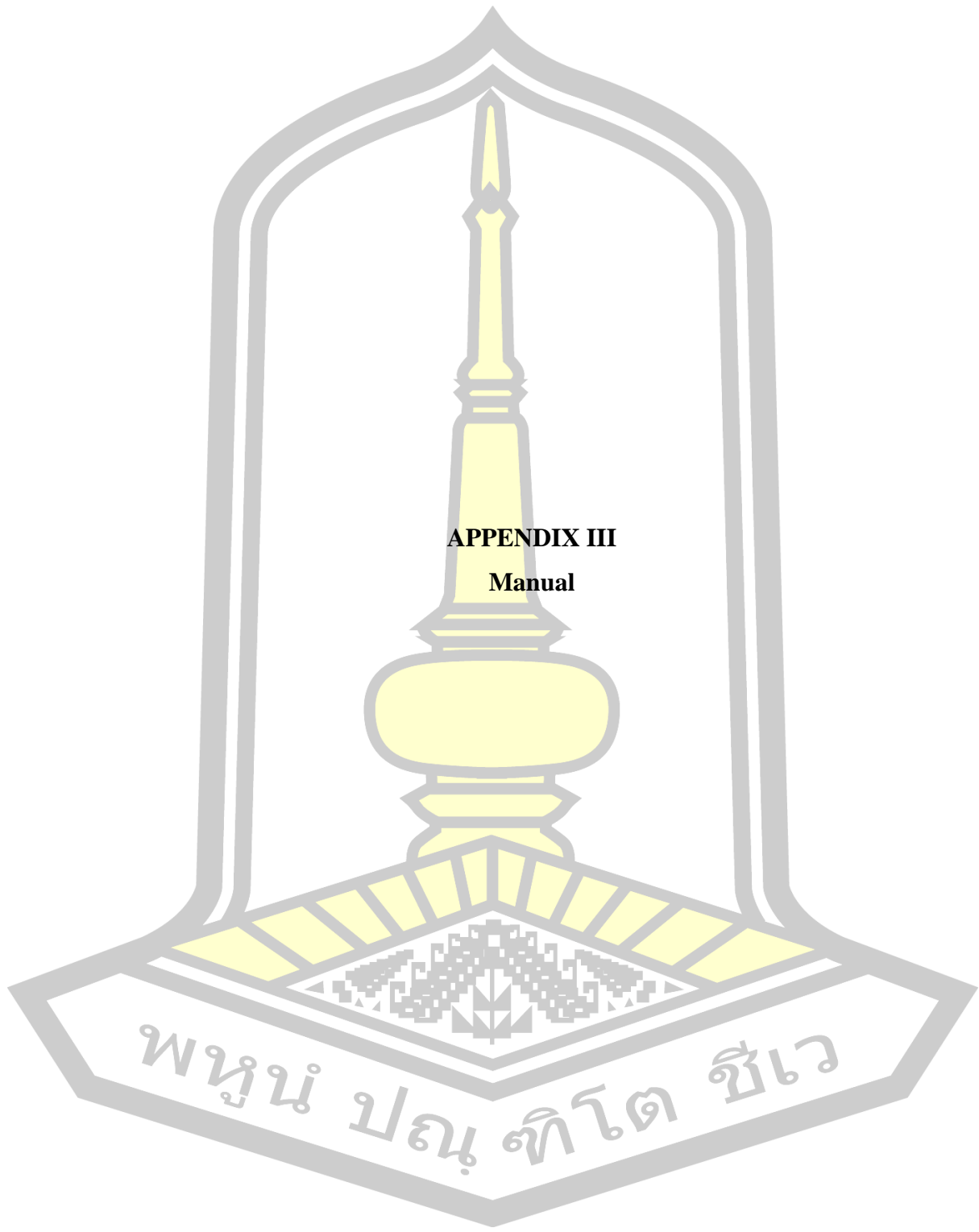
- 5 means suitability/feasibility at the highest level
- 4 means suitability/feasibility at the high level
- 3 means suitability/feasibility at the medium level
- 2 means suitability/feasibility at the low level
- 1 means suitability/feasibility at the lowest level



Items	suitability					feasibility				
	5	4	3	2	1	5	4	3	2	1
1. Principles										
2. Objectives										
3. Content										
Module1 Knowledge literacy										
Module2 Didactic ability										
Module 3 Digital literacy										
Module 4 Uphold fundamental principles and break new ground										
Module 5 Moral education ability										
4. Process										
5. Evaluation										
5.1 Pre-Development										
5.2 Development										
5.3 Post-Development										

Part 3 Suggestions regarding the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia





APPENDIX III

Manual

พหุ ประจันต์ ชัยเว

Manual

**Program to enhance competence of art teachers in university under the
background of New Liberal Arts in Ningxia**



This program is part of the study according to the Doctor of Education program. Creating a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia by Mrs. Baoyun Liu, educational development Graduate School, Mahasarakham University.

Introduction

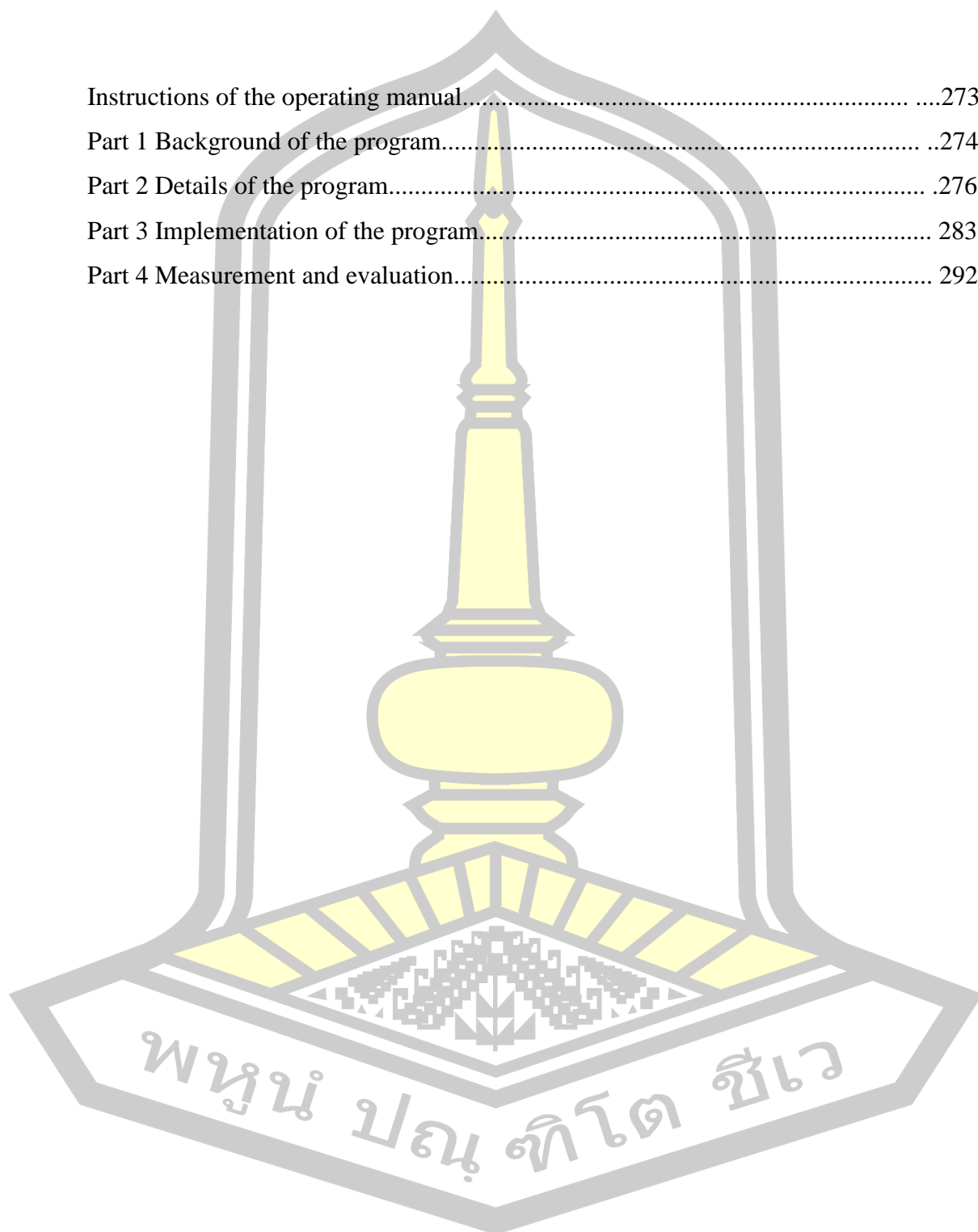
Creating a program to enhance the competence of art teachers in university under the background of New Liberal Arts in Ningxia focuses on the key elements affecting the development of art teachers competence, and starts from the key elements to formulate a program that meets the actual development of art teachers in university under the background of New Liberal Arts in Ningxia , to improve competence of art teachers in Ningxia universities in all aspects, and to contribute to the development of art education and the construction of New Liberal Arts in Ningxia universities. The essence part of this manual includes three parts, will including the components of the program which are: principle, objectives, content, development process and evaluation.

Thanks to all those who have contributed to this manual. During the development of this manual, numerous relevant parties provided assistance. The manual has been designed to serve as a comprehensive guide for art teachers in Ningxia universities, with the objective of enhancing their competence. This encompasses competence-related theories, knowledge and skills, with a primary focus on improving the quality of art education teaching in Ningxia universities in the context of New Liberal Arts, promoting the construction of New Liberal Arts in art disciplines in Ningxia universities.

Mrs. Baoyun Liu

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Instructions of using the operating manual

Create a program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia

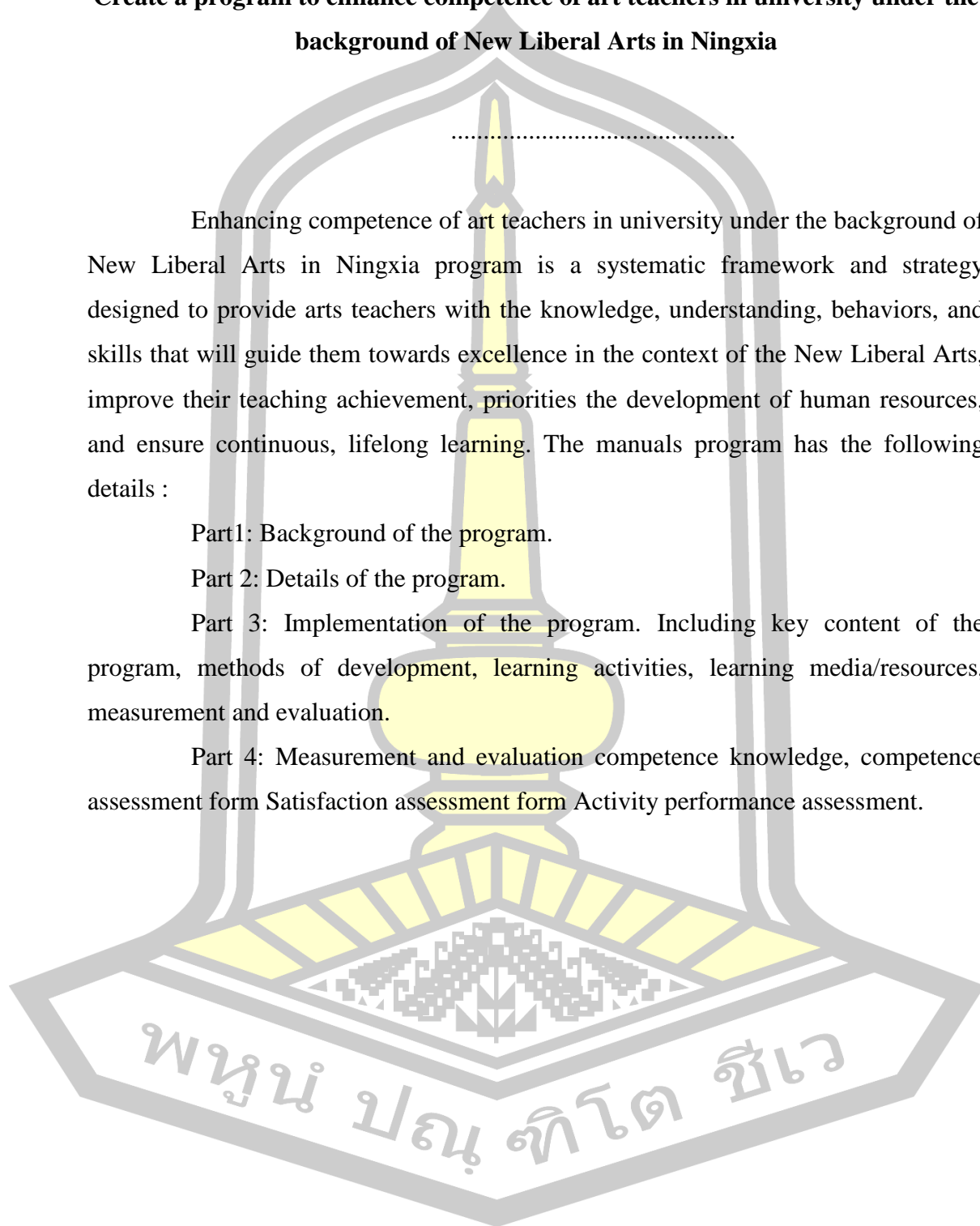
Enhancing competence of art teachers in university under the background of New Liberal Arts in Ningxia program is a systematic framework and strategy designed to provide arts teachers with the knowledge, understanding, behaviors, and skills that will guide them towards excellence in the context of the New Liberal Arts, improve their teaching achievement, priorities the development of human resources, and ensure continuous, lifelong learning. The manuals program has the following details :

Part1: Background of the program.

Part 2: Details of the program.

Part 3: Implementation of the program. Including key content of the program, methods of development, learning activities, learning media/resources, measurement and evaluation.

Part 4: Measurement and evaluation competence knowledge, competence assessment form Satisfaction assessment form Activity performance assessment.



Part 1 Background of the program

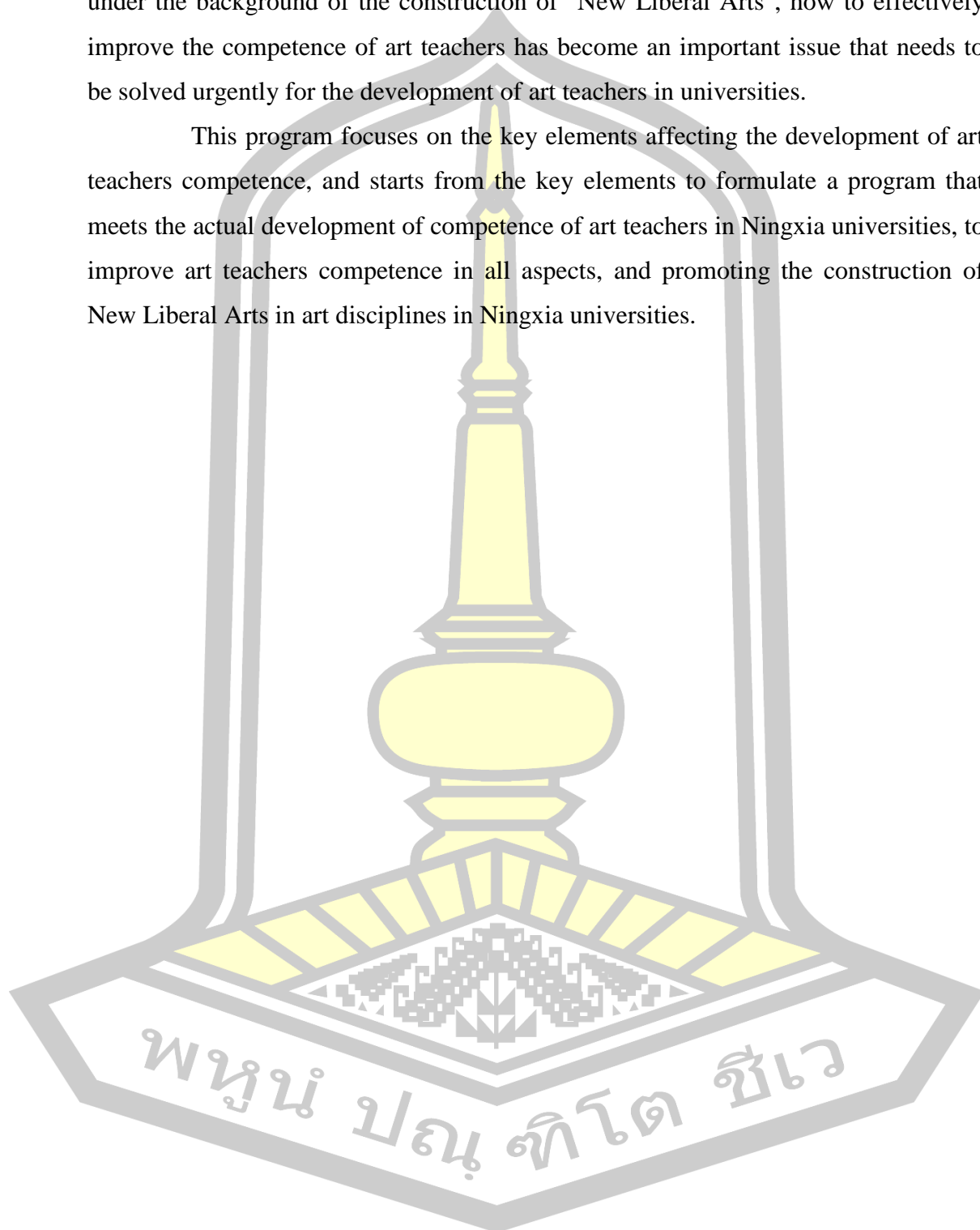
Competence theory has received widespread attention in the field of education, and the search for refined, specialized and professional teacher competence identification, development and training tools has become an important task for universities to transform human resource management and promote teachers' competence enhancement. Teacher competence refers to the synthesis of teachers' personality traits, knowledge, and teaching skills and attitudes needed in different teaching contexts.

In November 2020, the Declaration on the Construction of New Liberal Arts was released, marking the full launch of the construction of New Liberal Arts. New Liberal Arts is an innovative development of liberal arts education in the new era. Art is one of the six disciplines of the liberal arts. How to promote new changes in art education in the context of the new liberal arts, and how to cultivate new artistic talents who can adapt to the development trend of contemporary education has become a proposition of the times in front of art educators in colleges and universities, and puts forward new requirements for the competence of art teachers in colleges and universities. The construction of 'New Liberal Arts' requires arts teachers to strengthen value leadership, effective integration of ideological and political education into professional teaching, adapt to the development of the digital and intelligent era, innovate teaching thinking and methods, broaden the international vision, break down the disciplinary barriers, and effectively promote the in-depth integration within the liberal arts and between the liberal arts and other disciplines.

However, the current state of art teachers competence does not meet the competence needs of the new liberal arts development at the moment. There is a lack of "composite" teachers in most higher art colleges and universities, and the teaching of art theory is characterized by the solidification of the content of the curriculum, the solidification of the thinking of the traditional classroom, and the phenomenon of programs and inert teachers' teaching thinking and the way in which they transfer knowledge Art teachers have insufficient awareness of inheriting local traditional culture, emphasize practical skills, are relatively weak in subject theory, have a single-minded teaching mindset, and need to strengthen their ability to integrate with

modern information technology and innovate their teaching methods. Therefore, under the background of the construction of "New Liberal Arts", how to effectively improve the competence of art teachers has become an important issue that needs to be solved urgently for the development of art teachers in universities.

This program focuses on the key elements affecting the development of art teachers competence, and starts from the key elements to formulate a program that meets the actual development of competence of art teachers in Ningxia universities, to improve art teachers competence in all aspects, and promoting the construction of New Liberal Arts in art disciplines in Ningxia universities.



Part 2 Details of the program

A review of relevant documents and research, as well as multiple case studies from educational institutions with exemplary practices, reveals a consensus on both the methods and the proportion of development. The researcher determined the concept of leadership development in accordance with the concept 70:20:10 model. The analysis of needs indicated that the order of priority need index modified (PNImodified) for all 5 components rank as the follows, the first, Digital literacy, the second, Didactic ability , the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground. The 5 development methods are as follows: 1) Self-learning from practical work 2) Assignment 3) Coaching 4) Job Shadowing and 5) Training. The researcher thus determined the requisite time period for the learning of competence development for art teachers in Ningxia universities to be 150 hours, representing the 70% (105 hours) is learning through experience, 20 % (30 hours) is learning through others, and 10% (15 hours) is learning through courses.

1. Objective

Enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia.

Teacher competence refers to the professional knowledge, professional skills and professional values that individual teachers possess in relation to the implementation of successful teaching, and it is a deep-level comprehensive trait containing knowledge, teaching skills, emotions, attitudes and internal motivation for teaching, and it is the manifestation of teachers' practical knowledge, and it is the beliefs that are formed after correctly grasping the external things. It is a necessary condition for teachers to engage in excellence in teaching and a major training goal of teacher education institutions. To deal with challenges that may arise to achieve the goals of the New Liberal Arts, which has 5 components: knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground, and uphold fundamental principles and break new ground.

2. Principles

The program follows the 70:20:10 framework principle.

Teacher competence refers to the professional knowledge, professional skills and professional values that individual teachers possess in relation to the implementation of successful teaching, and it is a deep-level comprehensive trait containing knowledge, teaching skills, emotions, attitudes and internal motivation for teaching, and it is the manifestation of teachers' practical knowledge, and it is the beliefs that are formed after correctly grasping the external things. It is a necessary condition for teachers to engage in excellence in teaching and a major training goal of teacher education institutions. Therefore, teachers can guide all learners to achieve the competence standards set in the education standards by using the principles concept of personnel development according to the 70:20:10 framework.

The 70:20:10 framework, a model that is used around the world in both the public and private sectors. To support learning for both individuals and organizations It is divided into 3 parts as follows: 1) 70% learning through experience is an experience that comes from learning in routine work, receiving challenging assignments, and practicing learning from the experiences that occur. 2) 20% learning through others, which is learning that is supported through interaction with others obtained from mentoring, coaching, and personal networks or working together with others and 3) 10% learning through courses is formal learning. It is learning and development through structured courses and programs that go beyond work.

3. Content

Content of the program to enhance competence of art teachers in university under the background of New Liberal Arts in Ningxia. divided in to 5 modules which include:

Module 1: knowledge literacy

The content in this module is about art teachers in university must have the multidisciplinary and cross-fertilised knowledge structure and knowledge crystals in order to apply to the requirements of the construction of new liberal arts. It includes professional knowledge of a subject, interdisciplinary knowledge literacy, basic theoretical knowledge of pedagogy, knowledge of the humanities, and creative

practice knowledge. The organic combination of these knowledge constitutes the unique knowledge structure and ability system of art teachers in colleges and university, reflecting the teachers' knowledge reserves in their professional fields, and providing a solid support for their teaching, scientific research and social service activities.

Module 2: didactic ability

The content in this module is art teachers in university have the ability to use advanced teaching concepts, guide students in their learning activities, complete teaching activities scientifically and effectively, and achieve teaching goals in the context of the new liberal arts, as well as the ability of teachers to manage the entire teaching process. It covers a variety of psychological and behavioral characteristics shown by art teachers in teaching activities, including teaching design ability, teaching implementation ability, teaching regulation ability and teaching evaluation ability.

Module 3: digital literacy

The content in this module is about art teachers in university have the ability to use digital tools and platforms to implement art teaching, scientific research and art creation activities, and to have the ability to reform and innovate the development of higher art education empowered by artificial intelligence. It includes digital awareness, digital technology knowledge and skills, digital application and digital social responsibility.

Module 4: uphold fundamental principles and break new ground

The content in this module is about in the context of the new liberal arts, art teachers in university have the ability to adhere to the dialectical unity of inheritance and development, regularity and purpose when teaching and educating people. On the one hand, they can adhere to the truth, including adhering to the original mission of "educating people for the Party and educating talents for the country", following the objective laws of art education, and inheriting the fine traditions of art education. On the other hand, they can carry forward the spirit of innovation, expand the instrumental nature of art disciplines, and give new vitality to art disciplines through the social demand-oriented and practice-oriented cultivation of talents.

Module 5: moral education ability

The content in this module is about art teachers in universities insist on moral education as the first priority, and can educate moral talents and cultivate talents with moral character, so that they can better undertake their responsibilities as teachers and guides; insist on the principle of ‘people-oriented’, and take teaching as the centre to cultivate the knowledge and practical ability of students, and cultivate and develop art talents in line with the needs of the times. Moral education ability involves the charisma of the teacher and the emotional dynamics of teaching.

4. Development methods

The methods of development for the enhancement of art teachers' competence under the background of New Liberal Arts in Ningxia are follows:

1) Self-learning from practical work is the process of acquiring knowledge, skills and understanding through hands-on participation in real-world tasks and activities without formal guidance or structured instruction. Self-learning from practical work is a form of self-directed learning, this type of learning often occurs in the workplace, self-learning from practical work is less formal and more experiential.

2) Assignment is an important function of human resources management and usually refers to the placement of personnel and equipment into specific work assignments on a case-by-case basis according to actual needs. It may also refer to the assignment of specific tasks, which may be short-term, long-term, full-time or part-time. Such assignments may be based on a variety of factors, including an individual's skills, experience, availability, and the nature and requirements of the task. job assignment is an important concept at both the organizational and individual levels, helping to ensure that resources are used efficiently and effectively, as well as contributing to the achievement of individual and team goals.

3) Job Shadowing is a vocational training method that allows learners to understand the specific job content, responsibilities, required skills, and work environment of a particular occupation or position by following and observing an employee performing their daily tasks. It differs from mere visits or traditional internships in that it emphasizes hands-on experience and in-depth interaction, allowing individuals to clarify their career goals and development paths, and aiding in a more accurate assessment of their interests and abilities. Furthermore, Participants

have the opportunity to interact and communicate with professionals in the workplace, who may become mentors or partners on their future career journeys.

4) Coaching is a comprehensive, systematic and personalized coaching process, in which coaches play the roles of guides and supporters, listen, ask questions, give feedback, emphasize on individual's intrinsic motivation and self-worth, encourage the coaches to take the initiative in thinking, self-reflection and continuous learning, and help them to clarify the goals, formulate the plans, solve the problems and overcome the obstacles. This process not only focuses on the personal growth of the coaches, but also on the overall effectiveness of the team. By stimulating the potential of team members and improving team communication and collaboration, Coaching helps to achieve the overall goal of the team.

5) Training is an important process aimed at enhancing the professional competence and teaching ability of teachers, and promoting their professional development. Teacher training will develop personalized training plans and courses based on the needs and characteristics of different teachers, usually covering multiple aspects, including educational psychology, educational theory, teaching methods, and educational technology. The forms are diverse, including seminars, lectures, training courses, online learning, etc.

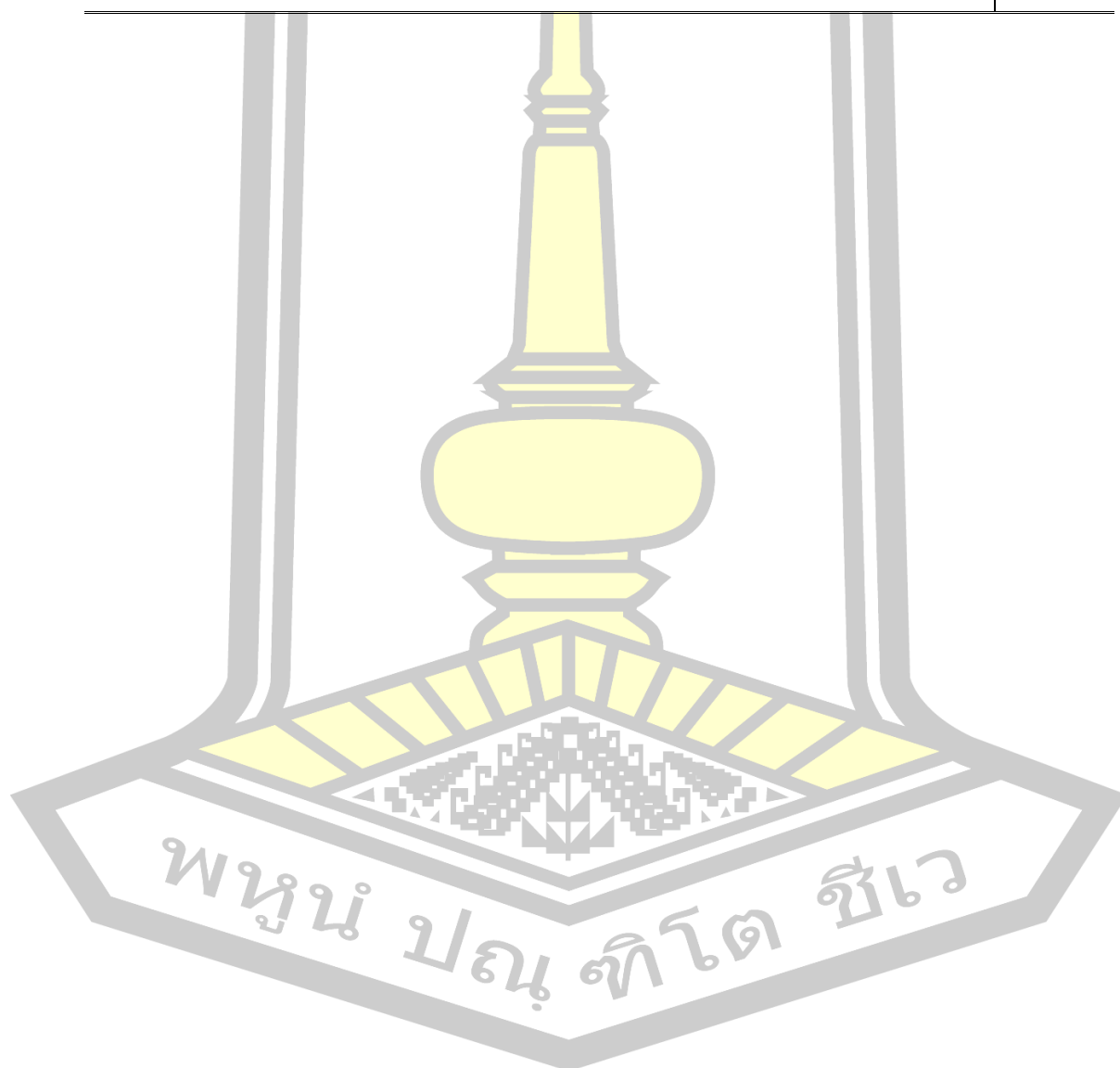
Program content module time allocation

The analysis of needs indicated that the order of priority need index modified (PNImodified) for all 5 components rank as the follows, the first, Digital literacy, the second, Didactic ability , the third, Knowledge literacy, the fourth, Moral education ability, and the last Uphold fundamental principles and break new ground. The time allocated to each of the five modules was 30 hours for knowledge literacy, 35 hours for didactic ability, 40 hours for digital literacy, 23 hours for moral education ability, and 22 hours for uphold fundamental principles and break new ground. As shown in table 1.

Table 1 The time allocated to each of the five modules

Components	Principle	Methods	Hours
Knowledge literacy	70% learning through experience	Self-learning from practical work Assignment	21
	20% learning through others	Coaching Job shadowing	6
	10% learning through courses	Formal training	3
Subtotal			30
Didactic ability	70% learning through experience	Self-learning from practical work Assignment	25
	20% learning through others	Coaching Job shadowing	7
	10% learning through courses	Formal training	3
Subtotal			35
Digital literacy	70% learning through experience	Self-learning from practical work Assignment	28
	20% learning through others	Coaching Job shadowing	8
	10% learning through courses	Formal training	4
Subtotal			40
Uphold fundamental principles and break new ground	70% learning through experience	Self-learning from practical work Assignment	15
	20% learning through others	Coaching Job shadowing	4
	10% learning through courses	Formal training or lecture	3
Subtotal			22
Moral	70% learning through	Self-learning from practical work	16

Components	Principle	Methods	Hours
education	experience	Assignment	
ability	20% learning through others	Coaching Job shadowing	5
	10% learning through courses	Formal training	2
Subtotal			23
Total			150



Part 3 Implementation of the program

The program is scheduled to take a total of 150 hours to complete, with a duration of 5 hours per day over a period of 30 days. The development process is divided into 3 steps as follows:

Step 1, designated the Training Intensive. The module Digital literacy with 4 hours, the module Moral education ability with 2 hours, and the remaining three modules each comprising 3 hours, total in 15 hours, corresponds to 10% learning through courses.

Step 2, designated learning through others with coaching (14 hours) and job shadowing (16 hours) in educational institutions, total in 30 hours, corresponds to 20% learning through others.

Step 3, designated learning through teaching practice with Self-learning from practical work (56 hours) and Assignment (49 hours) within educational institutions, total in 105 hours. The process plan for program implementation as follows tables 23, corresponds to 70% learning through experience. Table 2 The process plan for program implementation(revised)

Content	Time(hours)	Media	Undertaker		
Process 1 Training Intensive (15 hours)					
Knowledge literacy	3	-Intelligent classroom -PPT -knowledge handbook	Experts		
Didactic ability	3				
Digital literacy	4				
Uphold fundamental principles and break new ground	3				
Moral education ability	2				
Process 2 learning through the observation of others (30 hours)					
Coaching	Knowledge literacy	3	14	-diary notes -knowledge handbook	Coaches
	Didactic ability	3			
	Digital literacy	4			
	Uphold fundamental principles and break	2			

Content		Time(hours)	Media	Undertaker
Job shadowing	new ground			
	Moral education ability	2		
	Knowledge literacy	3		
	Didactic ability	4		
	Digital literacy	4		
	Uphold fundamental principles and break new ground	2		
	Moral education ability	3		
Process 3 Learning through teaching practice within educational institutions (105 hours)				
Self-learning from practical work	Knowledge literacy	12		
	Didactic ability	13		
	Digital literacy	15		
	Uphold fundamental principles and break new ground	8		
	Moral education ability	8		
Assignment	Knowledge literacy	9	-diary notes -knowledge handbook	Art teachers
	Didactic ability	12		
	Digital literacy	13		
	Uphold fundamental principles and break new ground	7		
	Moral education ability	8		
total	150 (hours)			

In order to show the content of the program more clearly and to facilitate its implementation, the specific activities of each module will be shown in detail one by one below. According to the personnel development model 70:20:10, the 70% is

experiential learning (105 hours) , 20 % is learn from others (30 hours), and 10% is learning through the formal education (15 hours).

1) Specific activities of 70% learning through experience

Experiential learning is a form of learning, accumulating experience through practical operation and daily work, refers to learning and development through challenging work tasks. These tasks typically involve solving practical problems, program management, and daily job responsibilities. Art teachers accumulate experience and learn new knowledge and skills in the process of solving actual problems. the suitable methods for on job learning are self-learning from practical work (56 hours) and assignment (49 hours), the details were showed at the table 3.

Table 3 Specific activities of 70% learning through experience (revised)

70% learning through experience		
Module	Methods	Content/Activities
	subtotal hours: 21 hours	
Module1 Knowledge literacy	Self-learning from practical work (12 hours)	1.To pursue the frontiers of the discipline and improve the professional theoretical level. 2.To practice the concept of art education in the context of "new liberal arts". 3.To explore the teaching path of multidisciplinary intersection and integration. 4. Participate in interdisciplinary research collaboration. 5. Analyze the psychology of student learning. 6. Practice General Secretary Xi Jinping's important ideas on education.
	Assignment (9 hours)	1.Analysis of the application of cutting-edge knowledge in various academic disciplines. 2.Analysis of excellent cases of cross-disciplinary and integrated teaching. 3.Demonstration and sharing of the effectiveness of arts

70% learning through experience		
Module	Methods	Content/Activities
		education in the context of the “New Liberal Arts”. 4.Learning advanced education concepts and methods.
	subtotal hours: 25 hours	
Module 2 Didactic ability	Self-learning from practical work (13 hours)	<ol style="list-style-type: none"> 1.Improve course design. 2.Integrate or develop intelligent teaching resources through information technology. 3. Implement student-centred teaching and classroom management. 4. Dynamically grasp students' learning needs. 5. Conduct comprehensive and scientific academic assessment of students. 6.Constructively summarize and reflect on teaching.
	Assignment (12hours)	<ol style="list-style-type: none"> 1.Complete the revision of the syllabus and lesson plans of the OBE teaching concept. 2. Construct a scientific evaluation system combining quantitative and qualitative evaluation. 3.Designing programs to stimulate student participation in the classroom. 4.Designing personalized teaching strategies 5.Organise reporting on course outcomes.
	subtotal hours: 28 hours	
Module 3 Digital literacy	Self-learning from practical work (15 hours)	<ol style="list-style-type: none"> 1.Utilise digital teaching platforms for curriculum design and teaching activities. 2.Use digital technology resources for individualized teaching to ensure that every student can benefit from the digitalization of education. 3.Apply data analysis models for academic data analysis. 4.Monitor, reflect and optimize the use of digital

70% learning through experience

Module	Methods	Content/Activities
		intelligence platforms and tools in education. 5. Use digital intelligence technologies or platforms for collaborative education at home, school and in society. 6.Guiding students to use AIGC for artistic practice. 7.Maintain network security in the teaching and learning process.
	Assignment (13 hours)	1.Design an innovative digital teaching model. 2.Conduct course construction on the "Learning Pass". 3.Conduct academic assessment on the digital teaching platform. 4.AI-enabled courseware production 5.Analyse examination results using digital technology resources.
	subtotal hours: 15 hours	
Module 4 Uphold fundamental principles and break new ground	Self-learning from practical work (8 hours)	1.Transforming cutting-edge knowledge of disciplines and societal needs into teaching resources. 2. Innovate teaching methods. 3.Enriching teaching methods through the use of multimedia and digital tools. 4. Instructing students to participate in innovation and entrepreneurship contests or artistic creation contests. 5. Collaborate with scholars within and outside the discipline or companies to develop research programs. 6.Participate in the creative practice of art to serve society.
	Assignment (7 hours)	1.Outstanding Case Study of Art Education in “uphold fundamental principles and break new ground”. 2. Reconstructing curriculum content based on a new view of knowledge.

70% learning through experience		
Module	Methods	Content/Activities
		3.Rethinking Teaching and Learning with a Change Orientation. 4.Promoting Digital Transformation Practices by means of Diffractive Thinking.
subtotal hours: 16 hours		
Module 5 Moral education ability	Self-learning from practical work (8 hours)	1.Demonstrate good teacher ethics in the process of education and teaching. 2. Achieving good emotional management in the process of education and teaching. 3.Paying attention to students' emotional needs and establishing good teacher-student relationships. 4. Do a good job of program ideology in teaching and learning. 5. Designing challenging learning tasks to develop students' critical thinking skills. 6.Helping students to enhance their international perspective.
	Assignment (8 hours)	1.Tapping into the moral education elements in teaching materials 2.Creating the theme of 'Building a strong sense of common themes for the Chinese nation'. 3.Organising students to reflect on their artistic creations 4.Guiding students to participate in social practice
	Total	105hours

2) Specific activities of 20% learn through others(revised)

Learning through other is a form of learning from other excellent art teachers, other experienced scholar, experts and so on , refers to learning and development through observing others, communicating with them, and receiving

feedback. This includes communication, collaboration with colleagues, supervisors, and professionals, as well as observing others' successful experiences and practices. Through this approach, art teachers can acquire new insights, techniques, and methodologies, which they can then apply to their own work. the available methods of learning from others including coaching (14 hours) an job shadowing (16 hours), the details were showed at the table 4.

Table 4 Specific activities of 20% learning through others

20% learn through others		
Module	Methods	Content/Activities
subtotal hours: 6 hours		
Module1 Knowledge literacy	Coaching (3 hours)	1.Ways to improve professionalism. 2.Practical application of advanced teaching concepts. 3.Ways of breaking down professional barriers.
	Job Shadowing (3 hours)	1.Development of interdisciplinary collaborative research. 2. Diversified teaching methods 3.Observation and analysis of student learning and behaviour.
subtotal hours: 7 hours		
Module 2 Didactic ability	Coaching (3 hours)	1.Observation and analysis of the learning situation. 2.Curriculum design and lesson plan writing. 3.Effective classroom management. 4.Teaching reflection and feedback.
	Job Shadowing (4 hours)	1.Implementation and management of flipped classrooms. 2. Guidance and managing creative practice. 3. Skills in real-time academic assessment and feedback.
Module 3 subtotal hours: 8 hours		
Digital literacy	Coaching (4 hours)	1. Strategies for selecting and using digital technology resources.

20% learn through others

Module	Methods	Content/Activities
		2.Application of intelligent teaching assistants 3.Use of digital technology to assist classroom teaching 4.Visual presentation of academic data analysis results with the help of digital tools and rational interpretation.
	Job Shadowing (4 hours)	1. Construction and application of digital educational resources. 2.Implementing blended teaching. 3.Collaborative teaching using information technology. 4.Digital academic evaluation and feedback.
	subtotal hours: 4 hours	
Module 4 Uphold fundamental principles and break new ground	Coaching (2 hours)	1.Requirements of Teaching Innovation Competition and Guidance on Preparation for the Competition。 2.Declaration and Implementation of Industry-University-Research programs。 3.Innovative Talent Cultivation Methods.
	Job Shadowing (2 hours)	1.Preparation for Teaching Innovation Competition. 2.AI-enabled Scientific Research.
	subtotal hours: 5 hours	
Module 5 Moral education ability	Coaching (2 hours)	1. Modes and methods of moral education. 2.Construction of “Course Ideological and Political Education” programs. 3.Pathways to “Three-wide Education”.
	Job Shadowing (3 hours)	1.Design and Implementation of Course Ideological and Political Education. 2.Moral education in creative practices. 3.Problem-oriented group collaborative learning model.
Total	30 ours	

3) Specific activities of 10% learning through courses

Learning through formal education is a form of learning focusing on formal focused training, through courses or courses already prepared. It took 15 hours by using formal education method. Specific arrangements are as shown in Table 5.

Table 5 Specific activities of 10% learning through courses (revised)

10% learning through courses		
Module	Methods	Content/Activities
	subtotal hours: 3 hours	
Module1 Knowledge literacy	Training (3 hours)	The transformation of roles and the professional development of art educators within the context of the 'New Liberal Arts' paradigm.
	subtotal hours: 3 hours	
Module 2 Didactic ability	Training (3 hours)	The integration of both online and offline instructional design and implementation competencies.
	subtotal hours: 4 hours	
Module 3 Digital literacy	Training (4 hours)	Application of digital teaching tools, the acquisition and management of digital resources, and the optimization of curriculum design through digital technologies.
	subtotal hours: 3 hours	
Module 4 Uphold fundamental principles and break new ground	Training (3 hours)	The "Changes" and "No Changes" in Art Education Innovation: The Scientific Connotation and Practical Path of "uphold fundamental principles and break new ground".
	subtotal hours: 2 hours	
Module 5 Moral education ability	Training (2 hours)	The Moral Education Function of Art Education in Colleges and Universities and the New Path of Moral Education.
Total	15 hours	

Part 4 Measurement and evaluation

1. The evaluation process is conducted in 3 stages

Evaluation should be carried out throughout the program, at the beginning, middle and end of the program, in order to understand the gradual improvement of teachers' competence.

1) Pre-Development Evaluation

Before program development, evaluation is crucial, which is related to the feasibility and success of the program as well as the rationality of resource allocation. Before program development, the researcher assessed the current status of competence, training needs, required resources and expected effects of art teachers in Ningxia university. The evaluation methods mainly used questionnaires and interviews. Questionnaires were used to collect information about art teachers' self-evaluation of their competence and training needs in Ningxia colleges and university. Interviews were conducted with teachers to gain an in-depth understanding of their training needs and expectations, and with school management to understand the school's specific requirements for teacher competency. Based on the results of the evaluation, a targeted training program was developed to clarify the training objectives, content, mode and time, and to provide a scientific basis for the development of an effective program to enhance the competence of art teachers in Ningxia colleges and university.

2) Development Evaluation

During the implementation of the program, the effectiveness of the training should be dynamically evaluated. The following evaluation methods are mainly adopted:

Behavioral observations: Observation records are kept of teachers' performance in the training, including participation, interaction and practical skills.

Reflective logs: Teachers are encouraged to write reflective logs of their teaching to understand their self-perception and actions for improvement in the teaching process.

Interviews: Communication with participating teachers during the implementation of the program in order to assess in real time their learning experiences, gains as well as problems and difficulties.

3) Post-Development Evaluation

The post-development evaluation is an assessment of competence behavior subsequent to the utilization of the competence enhancement program. In order to ensure the comprehensiveness and effectiveness of the evaluation, it should be centred on multi-dimensional core indicators. It is necessary to compare the objectives set by the program with the actual performance of teachers after the training, so as to test the actual effectiveness of the training. Post-Development Evaluation is conducted using the competence measurement form and satisfaction questionnaire with five level evaluation: evaluate participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge or skills and participants' satisfaction.

Table 6 The assessments methods adopted at the different stages of the program

Stages		Evaluation methods
Pre-Development		-Questionnaires -Interviews
Development	-Self-learning from practical work -Assignment	-Reflective logs -Interviews
	-Coaching -Job Shadowing	-Behavioral observations -Reflective logs
	-Training	-Testing
	-Self-learning from practical work -Assignment -Coaching	-Measurement -Interviews -Satisfaction questionnaires
Post-Development	-Training	-Measurement -Satisfaction questionnaires

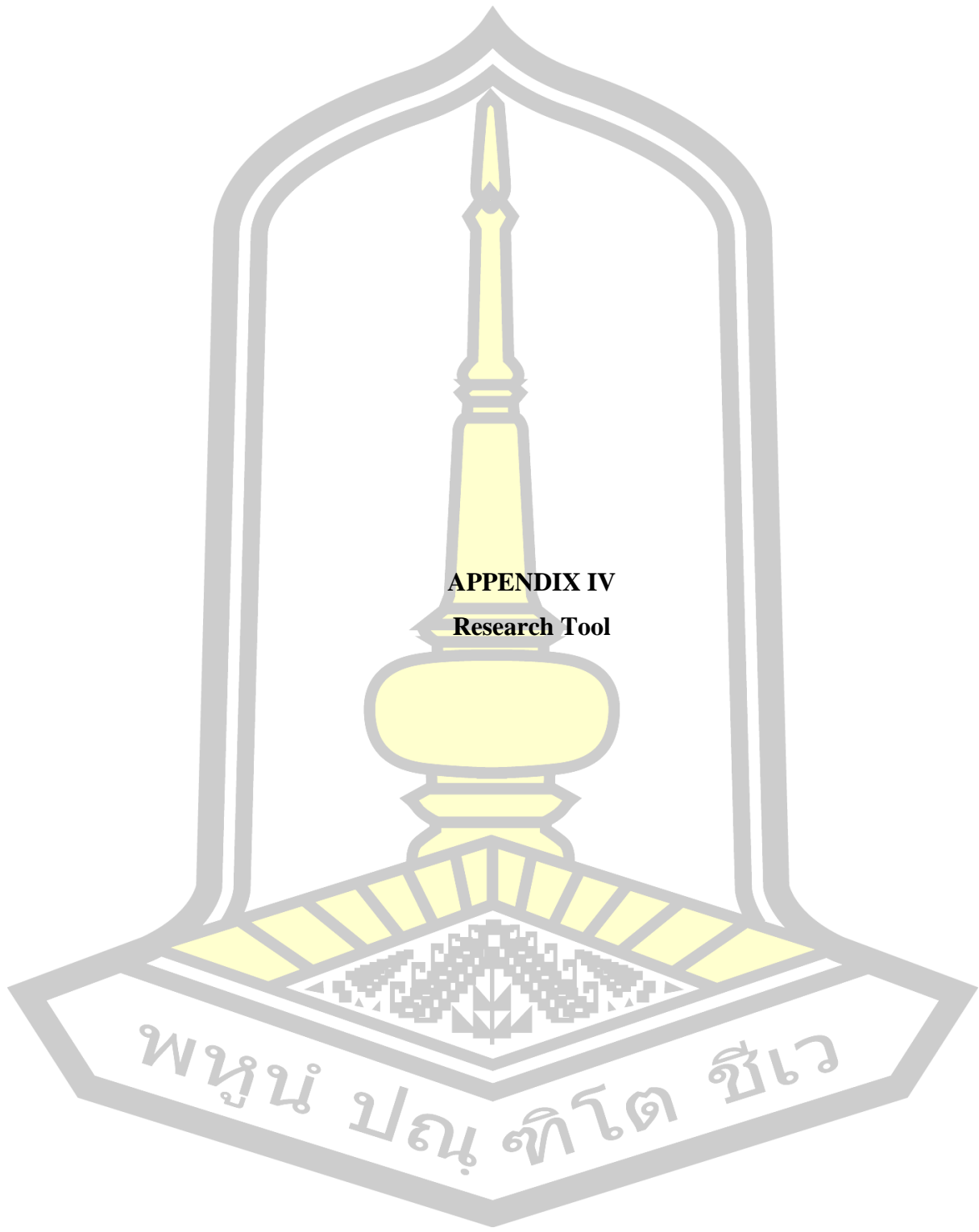
2. Evaluation Criteria

1) Trainees must have a training period of not less than 80 percent of the total time.

2) The assessment of learning from the knowledge and understanding test on competence has an average score after development of not less than 80 percent.

3) Assessments of the level of behavior change in the five areas of knowledge literacy, didactic ability, digital literacy, uphold fundamental principles and break new ground, and moral education ability will all be at a high level.





APPENDIX IV
Research Tool

พหุจน์ ปณฺ ทิโต ชีเว

Research Tool Evaluation Form
Expert Index of Concordance Assessment Form (IOC)

illustration:

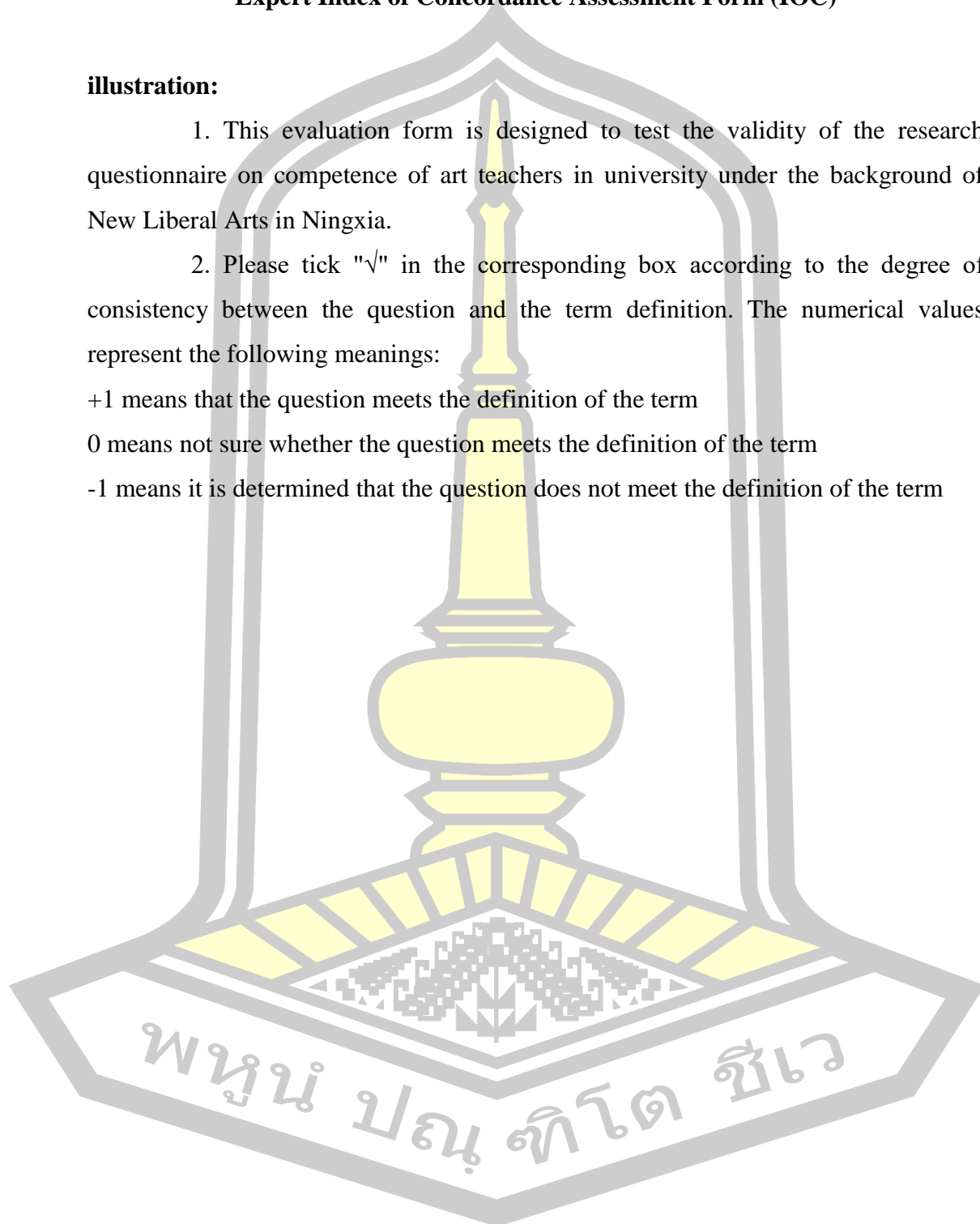
1. This evaluation form is designed to test the validity of the research questionnaire on competence of art teachers in university under the background of New Liberal Arts in Ningxia.

2. Please tick "√" in the corresponding box according to the degree of consistency between the question and the term definition. The numerical values represent the following meanings:

+1 means that the question meets the definition of the term

0 means not sure whether the question meets the definition of the term

-1 means it is determined that the question does not meet the definition of the term



Item	Question	Opinion			Suggestion
		+1	0	-1	
Knowledge Literacy					
1	You can systematically master the basic knowledge and fundamental skills of the subjects you teach, making connections, transferring and applying knowledge.				
2	You have a keen insight into the cutting-edge dynamics of discipline, and can track and study the latest research results and academic developments in a timely manner.				
3	You have the ability to apply interdisciplinary knowledge and approaches to problem solving.				
4	You can actively collaborate with teachers and researchers from other disciplines on interdisciplinary research programs and teaching activities.				
5	You can deeply understand the basic theories of the nature, purpose, and function of art education in the context of the new liberal arts, as well as the relationship between art education and social and individual development.				
6	You can master students learning psychology, motivation theories and motivational strategies, etc..				
7	You are familiar with a variety of teaching methods and strategies.				

Item	Question	Opinion			Suggestion
		+1	0	-1	
8	You have a broad knowledge of literature, history, philosophy, and politics, etc.				
Didactic Ability					
9	You can define the specific objectives of classroom teaching and ensure the relevance and effectiveness of teaching activities.				
10	You are well versed in the teaching materials and can accurately emphasize and explain the key points, difficulties and critical points of the teaching materials.				
11	You can apply advanced teaching concepts and adopt appropriate teaching strategies and methods.				
12	You can design scientific teaching procedures.				
13	You can integrate or develop intelligent teaching resources through professional knowledge and information technology means to meet dynamic teaching needs.				
14	You can teach students in accordance with their aptitude.				
15	You can communicate effectively with students and other teachers to better fulfil your teaching work.				
16	You can grasp the feedback information of teaching in time, output reliable				

Item	Question	Opinion			Suggestion
		+1	0	-1	
	information accurately, and exclude fallacious information in time.				
17	You can adjust the teaching content, change the teaching procedure, and adjust the teaching methods according to the actual situation of teaching.				
18	You have good classroom management skills and can effectively stimulate student interaction and participation.				
19	You can construct a comprehensive, scientific and rational evaluation system that combines quantitative and qualitative evaluation.				
20	You can construct assessment tools that effectively reflect student learning and ability levels.				
21	You have the ability to summarize and reflect, and can identify your strengths and weaknesses in the evaluation process.				
Digital Literacy					
22	You can recognize the important role of digital technology in enhancing teaching efficiency, optimizing the allocation of teaching resources and promoting educational equity.				
23	You can pay attention to the new challenges and opportunities brought by the development of digital technology.				

Item	Question	Opinion			Suggestion
		+1	0	-1	
24	You are willing to use digital technology to empower teaching, art creation and research.				
25	You have knowledge of common digital technologies, including concepts and basic principles of common digital technologies.				
26	You have the ability to continuously learn new knowledge, skills, and concepts of digital technologies.				
27	You have the ability to use various digital technology tools and teaching platforms proficiently.				
28	You can design teaching programs and learning environments that meet the characteristics of digital teaching.				
29	You can actively explore new modes, methods and paths of digital teaching to achieve informatization and intelligence in classroom teaching.				
30	You can conduct in-depth analysis of students' learning data using data analysis models to visualize and interpret academic data.				
31	In the process of using digital technology, you can strictly comply with relevant laws, regulations and policy requirements to ensure the legality and normality of teaching activities.				

Item	Question	Opinion			Suggestion
		+1	0	-1	
32	You can protect personal information , maintain work data security, and focus on network security protection to ensure the stability and security of the teaching environment.				
Uphold fundamental principles and Break new ground					
33	In the construction of the new liberal arts, you can maintain the basic principles and basic teaching rules of the art discipline.				
34	In the process of teaching art, you can carry forward the spiritual heritage and cultural qualities of the Chinese nation.				
35	In the process of teaching and scientific research, you can strictly abide by academic.				
36	In the process of teaching and research, you can be strictly firm in your political stance.				
37	You can constantly explore and practice new teaching methods and actively carry out teaching reforms.				
38	You can integrate the frontiers of your discipline and the needs of the society, and update and enrich the teaching contents in a timely manner.				
39	You can reform the traditional way of academic evaluation and comprehensively and dynamically				

Item	Question	Opinion			Suggestion
		+1	0	-1	
	evaluate the learning situation of your students.				
40	You can actively declare and carry out innovative and applied research topics, and regularly write and publish academic papers.				
41	You can flexibly use various research methods and technical means, such as big data analysis and artificial intelligence, to improve the efficiency and accuracy of research.				
42	You can transform scientific research results into practical applications in a timely manner, promote the socialization and industrialisation of scientific research results.				
Moral education ability					
43	You have a strong sense of professional responsibility and mission.				
44	You are caring and have good empathy skills.				
45	You have the professionalism and dedication to devote yourself to teaching and educating students all year round.				
46	You have enough confidence in your professional knowledge and skills, etc., and believe that you can adapt to the new liberal arts construction environment and do a good job in teaching.				

Item	Question	Opinion			Suggestion
		+1	0	-1	
47	You can fully explore the ideological and political elements in the teaching content of the course and guide students to strengthen their political stance and values.				
48	You can systematically guide students to improve their professionalism and work ethic in relation to the needs of society.				
49	You can inspire students to learn and think on their own, developing critical thinking and higher-order cognition.				
50	You can improve your students' international perspective and intercultural.				

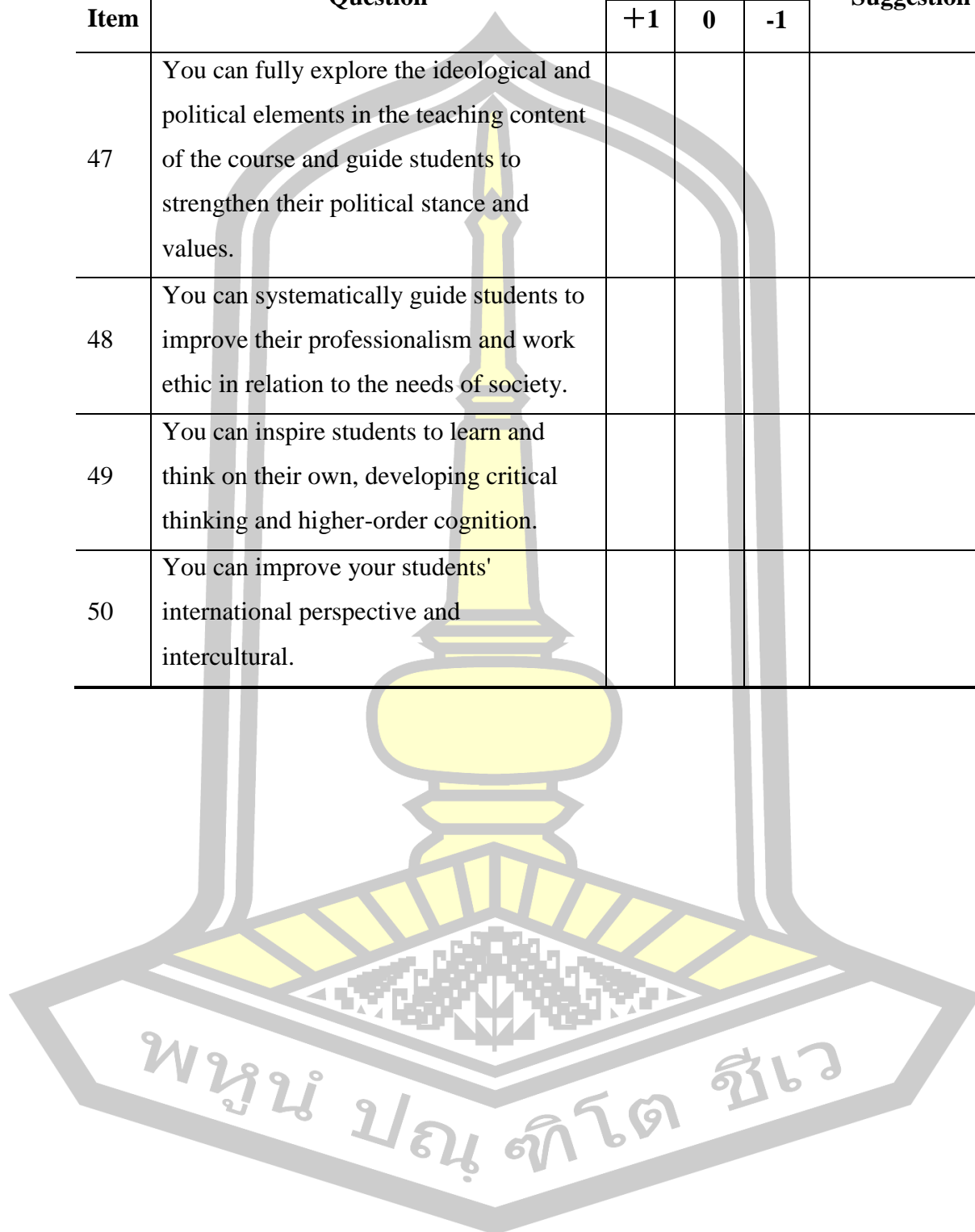
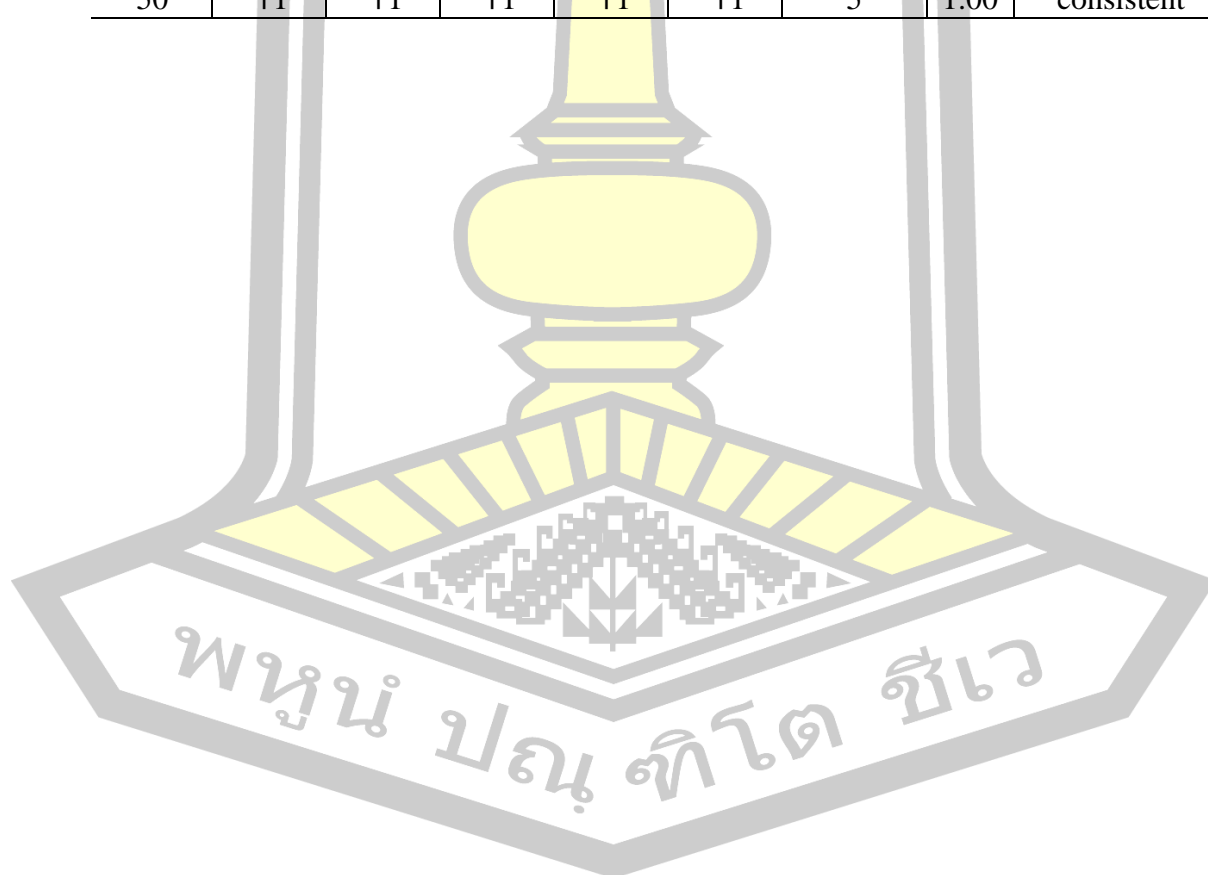


Table 28 Conformity index (IOC), the content of the questionnaire

Article	Experts					Together	IOC	Results of consideration
	1st person	2nd person	3rd person	4th person	5th person			
1	+1	+1	+1	+1	+1	5	1.00	consistent
2	+1	+1	+1	+1	+1	5	1.00	consistent
3	+1	+1	+1	+1	+1	5	1.00	consistent
4	+1	+1	+1	+1	+1	5	1.00	consistent
5	+1	+1	+1	+1	+1	5	1.00	consistent
6	+1	+1	+1	+1	+1	5	1.00	consistent
7	+1	+1	+1	+1	+1	5	1.00	consistent
8	+1	+1	+1	+1	+1	5	1.00	consistent
9	+1	+1	+1	+1	+1	5	1.00	consistent
10	+1	+1	+1	+1	+1	5	1.00	consistent
11	+1	+1	+1	+1	+1	5	1.00	consistent
12	+1	+1	+1	+1	+1	5	1.00	consistent
13	+1	+1	+1	+1	+1	5	1.00	consistent
14	+1	+1	+1	+1	+1	5	1.00	consistent
15	+1	+1	+1	+1	+1	5	1.00	consistent
16	+1	+1	+1	+1	+1	5	1.00	consistent
17	+1	+1	+1	+1	+1	5	1.00	consistent
18	+1	+1	+1	+1	+1	5	1.00	consistent
19	+1	+1	+1	+1	+1	5	1.00	consistent
20	+1	+1	+1	+1	+1	5	1.00	consistent
21	+1	+1	+1	+1	+1	5	1.00	consistent
22	+1	+1	+1	+1	+1	5	1.00	consistent
23	+1	+1	+1	+1	+1	5	1.00	consistent
24	+1	+1	+1	+1	+1	5	1.00	consistent
25	+1	+1	+1	+1	+1	5	1.00	consistent
26	+1	+1	+1	+1	+1	5	1.00	consistent
27	+1	+1	+1	+1	+1	5	1.00	consistent
28	+1	+1	+1	+1	+1	5	1.00	consistent
29	+1	+1	+1	+1	+1	5	1.00	consistent
30	+1	+1	+1	+1	+1	5	1.00	consistent
31	+1	+1	+1	+1	+1	5	1.00	consistent
32	+1	+1	+1	+1	+1	5	1.00	consistent
33	+1	+1	+1	+1	+1	5	1.00	consistent
34	+1	+1	+1	+1	+1	5	1.00	consistent
35	+1	+1	+1	+1	+1	5	1.00	consistent
36	+1	+1	+1	+1	+1	5	1.00	consistent

Article	Experts					Together	IOC	Results of consideration
	1st person	2nd person	3rd person	4th person	5th person			
37	+1	+1	+1	+1	+1	5	1.00	consistent
38	+1	+1	+1	+1	+1	5	1.00	consistent
39	+1	+1	+1	+1	+1	5	1.00	consistent
40	+1	+1	+1	+1	+1	5	1.00	consistent
41	+1	+1	+1	+1	+1	5	1.00	consistent
42	+1	+1	+1	+1	+1	5	1.00	consistent
43	+1	+1	+1	+1	+1	5	1.00	consistent
44	+1	+1	+1	+1	+1	5	1.00	consistent
45	+1	+1	+1	+1	+1	5	1.00	consistent
46	+1	+1	+1	+1	+1	5	1.00	consistent
47	+1	+1	+1	+1	+1	5	1.00	consistent
48	+1	+1	+1	+1	+1	5	1.00	consistent
49	+1	+1	+1	+1	+1	5	1.00	consistent
50	+1	+1	+1	+1	+1	5	1.00	consistent



Conformity index (IOC), the content of the questionnaire

Table 29 Confidence level of the existence state

Components	Cronbach's Alpha	N of Items
Knowledge literacy	0.940	8
Didactic ability	0.961	13
Digital literacy	0.967	11
Uphold fundamental principles and break new ground	0.938	10
Moral education ability	0.927	8

It can be seen from the table 29, the Cronbach Alpha coefficients for each of the components of the questionnaire art teachers competence existent state in this study exceeded 0.7, which indicates that the questionnaire has a high level of reliability as a whole. The Cronbach's Alpha coefficients of knowledge literacy, Didactic ability, Digital literacy, Uphold fundamental principles and break new ground and Moral education ability are 0.920, 0.949, 0.943, 0.922 and 0.910 respectively.

Table 30 Validity level of the existent state

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.878
Bartlett's Test of Sphericity	Approx. Chi-Square	3363.498
	df	1225
	Sig.	0.000

It can be seen from the table 30, the value of validity level of the existent state obtained from the KMO test is $0.878 > 0.7$ and the Bartlett's test of sphericity Sig is $0.000 < 0.05$, indicating that the data is suitable for factor analysis.

Table 31 Confidence level of the desired state

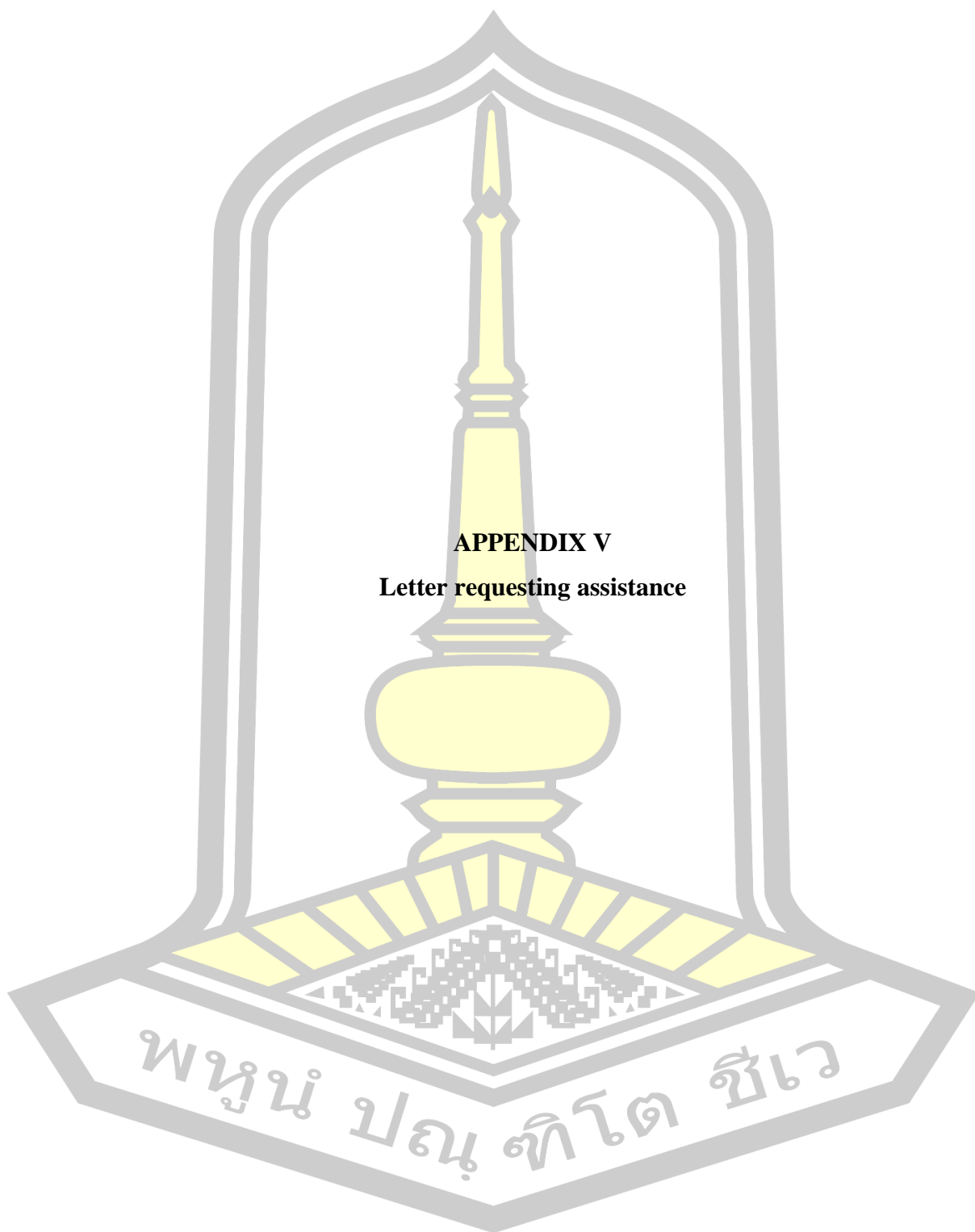
components	Cronbach's Alpha	N of Items
Knowledge literacy	0.940	8
Didactic ability	0.961	13
Digital literacy	0.967	11
Uphold fundamental principles and break new ground	0.938	10
Moral education ability	0.927	8

It can be seen from the table 31, the Cronbach Alpha coefficients for each of the components of the questionnaire art teachers competence desired state in this study exceeded 0.7, which indicates that the questionnaire has a high level of reliability as a whole, the Cronbach's Alpha coefficients of knowledge literacy, Didactic ability, Digital literacy, Uphold fundamental principles and break new ground and Moral education ability are 0.940, 0.961, 0.967, 0.938 and 0.927 respectively.

Table 32 Confidence level of the desired state

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.724
Bartlett's Test of Sphericity	Approx. Chi-Square	4530.379
	df	1225
	Sig.	0.000

It can be seen from the table 32, the value of validity level of the desired state obtained from the KMO test is $0.724 > 0.7$ and the Bartlett's test of sphericity Sig is $0.000 < 0.05$, indicating that the data is suitable for factor analysis.



APPENDIX V
Letter requesting assistance



FACULTY OF EDUCATION
MAHASARAKHAM UNIVERSITY

79/2 Muang, Maha Sarakham,
44000, THAILAND
Tel/fax +66 43 713 174
Email: cia.edu@msu.ac.th

MHESRI No. 0605.5 (2) / 2539

Date: September 11, 2024

Data Collection Permission Request

To: Whom It May Concern
North Minzu University,
Yinchuan City, Ningxia Hui Autonomous Region, China

Subject: Data Collection Permission Request

Our student, **Ms. Baoyun Liu**, student ID **65010561024**, majoring in the **Ed. D. Educational Administration and Development Program** is currently undertaking a research project titled **"Program to Enhance Competence of Art Teachers in University under the Background of New Liberal Arts in Ningxia"** under the guidance of Assoc. Prof. Suwat Julsuwan.

To ensure the success and quality of this project, we are seeking your permission to allow our students to process data collection within your institution.

The details of the data collection are as follows:

Thesis title: Program to Enhance Competence of Art teachers in University under the Background of New Liberal Arts in Ningxia

Period of data collection: September 2024 to November 2024

Thesis advisor: Assoc. Prof. Suwat Julsuwan

We believe that your institution provides a valuable environment and resources that are essential for the successful execution of this research. The data collection process will be carried out diligently and with the utmost respect for your institution's policies and procedures. We acknowledge that the student has made the necessary preparations, including obtaining the Thesis title approval from our institution.

Should you require any further information or clarification regarding this permission, please feel free to contact us by email.

Yours sincerely,

Assoc. Prof. Chowwalit Chookhampaeng
Dean, Faculty of Education,
Maharakham University



FACULTY OF EDUCATION
MAHASARAKHAM UNIVERSITY

79/2 Muang, Maha Sarakham,
44000, THAILAND
Tel/fax +66 43 713 174
Email: cia.edu@msu.ac.th

Center for International Affairs

MHESRI No. 0605.5 (2) / CL2524

Date: September 10, 2024

To: Prof. Dr.Wang Anquan
Dean of the Faculty of Education, Ningxia Normal University
Prof. Dr.Hao Zhenjun
Director of Education Department, Faculty of Teacher Education, Ningxia University
Prof. Dr.Wang Xihong
Dean of the Faculty of Educational Sciences, Ningxia Normal University
Prof. Dr.Zen Fenglan
Vice Dean of the Faculty of Education, Ningxia University
Prof. Dr.Yu Guolin
Director of Academic Affairs, Director of Teacher Development Centre, North Minzu University

Subject: Expert Invitation

Our student, **Ms. Baoyun Liu**, student ID **65010561024**, majoring in the **Ed. D. Educational Administration and Development Program** is currently undertaking a research project titled **"Program to Enhance Competence of Art Teachers in University under the Background of New Liberal Arts in Ningxia"** under the guidance of Assoc. Prof. Suwat Julsuwan.

To ensure the successful execution and the highest quality of this research project, we are seeking your valuable expertise and experience. Therefore, I am sending a formal invitation to you to serve as the expert reviewer for the research instrument designed for this thesis project.

Your participation in this academic endeavor is highly valued and appreciated. Should you require any further information or have questions regarding this invitation, please do not hesitate to contact us by email.

Yours sincerely,

Assoc. Prof. Chowwalit Chookhampaeng
Dean, Faculty of Education,
Maharakham University

Education is GROWTH



FACULTY OF EDUCATION
MAHASARAKHAM UNIVERSITY

79/2 Muang, Maha Sarakham,
44000, THAILAND
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Email: cia.edu@msu.ac.th

Center for International Affairs

MHESRI No. 0605.5 (2) / CL2524

Date: September 10, 2024

To: Prof. Dr.Xie Yanlong
The Faculty of Education Sciences, Ningxia University
Prof. Dr.Ding Fengqin
Doctoral Supervisor, The Faculty of Education, Ningxia University
Prof. Dr.Wang Xihong
Dean of the Faculty of Educational Sciences, Ningxia Normal University
Assoc. Prof. Dr.Li Xiaochun
Vice Dean of the Faculty of Education, Ningxia University
Assoc. Prof. Dr.Ma Wanzhi
The Faculty of Educational Sciences, Ningxia Normal University

Subject: Expert Invitation

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Yours sincerely,

Assoc. Prof. Chowwalit Chookhampaeng
Dean, Faculty of Education,
Maharakham University

Center for International Affairs

MHESRI No. 0605.5 (2) / CL2524

Date: September 10, 2024

To: Prof. Liu Zhuang
Vice Dean of the Faculty of Music and Dance, North Minzu University
Prof. Zuo Liguang
Former Dean of the Faculty of Design and Art, North Minzu University
Prof. Yang Zhanhe
The Faculty of Design and Art, North Minzu University
Assoc. Prof. Dr.Tao Li
Dean of Faculty of Literature and Art, Ningxia University of Science and Technology
Prof. Dr.Zhu Xuhui
The Faculty of Humanities, Tiangong University

Subject: Expert Invitation

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Yours sincerely,



Assoc. Prof. Chowwalit Chookhampaeng
Dean, Faculty of Education,
Mahasarakham University

Center for International Affairs

MHESRI No. 0605.5 (2) / CL2524

Date: September 10, 2024

To: Assoc. Prof. Dr.Su Guanyuan
 Dean of the Faculty of Design and Art , North Minzu University
Prof. Dr.He Jiao
 Dean of the Faculty of Music and Dance, North Minzu University
Prof. Dr.Wang Shengze
 Dean of the Faculty of Fine Arts, Ningxia University
Prof. Feng Chao
 Dean of the Faculty of Fine Arts, Ningxia Normal University
Assoc. Prof. Dr.Yan Wei
 Vice Dean of the Faculty of Traditional Chinese Opera, Shandong University of Arts

Subject: Expert Invitation

Our student, **Ms. Baoyun Liu**, student ID **65010561024**, majoring in the **Ed. D. Educational Administration and Development Program** is currently undertaking a research project titled **"Program to Enhance Competence of Art Teachers in University under the Background of New Liberal Arts in Ningxia"** under the guidance of Assoc. Prof. Suwat Julsuwan.

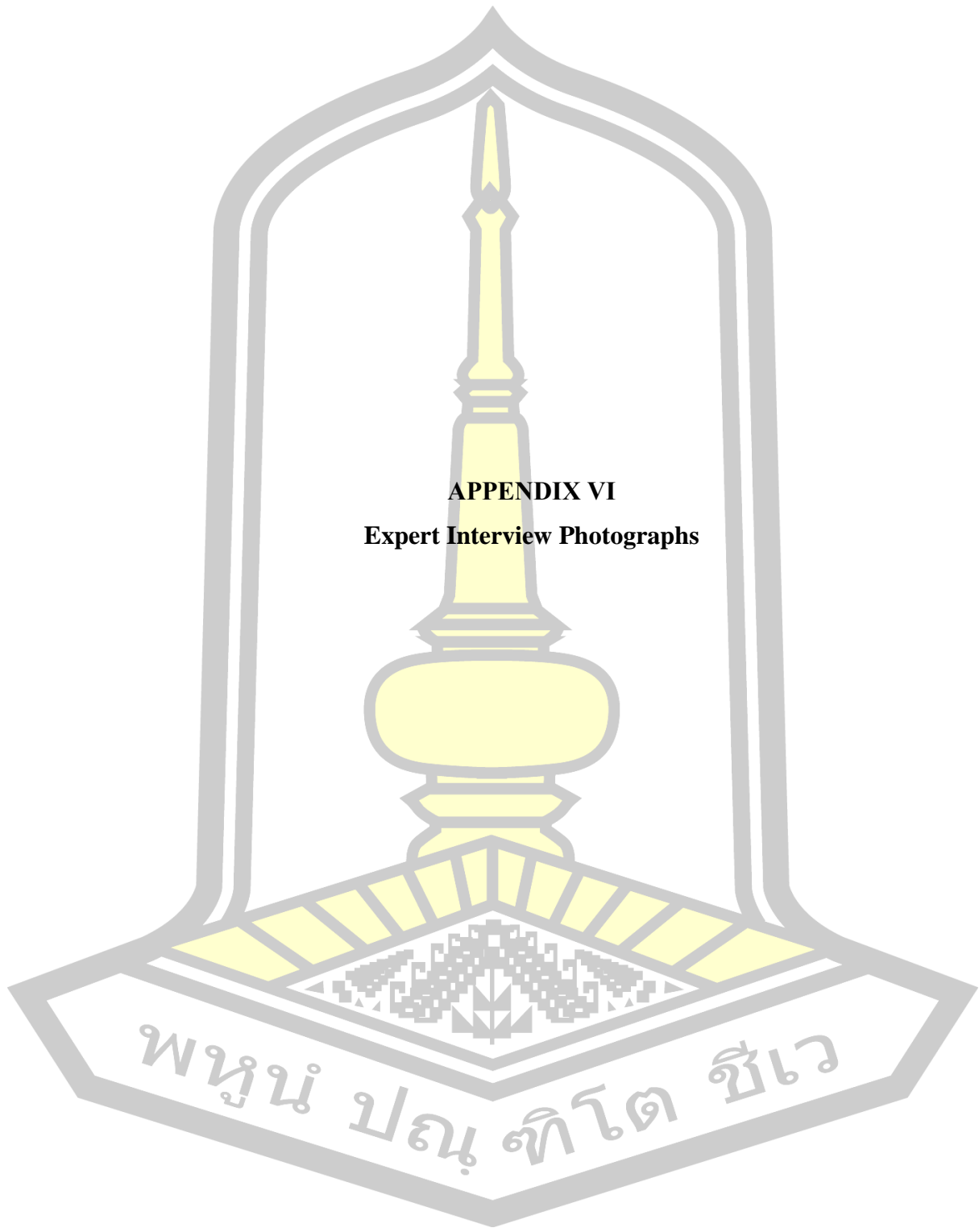
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Yours sincerely,



Assoc. Prof. Chowwalit Chookhampaeng
 Dean, Faculty of Education,
 Maharakham University



APPENDIX VI
Expert Interview Photographs

พหุจน์ ปณฺ ทิโต ชีเว



Investigation on the current situation of competence of art teacher in university under the background of New Liberal Arts in Ningxia



Interviews on the Competence of Art Teachers in Universities under the background of New Liberal Arts in Ningxia



Interviews on the Competence of Art Teachers in Universities
under the background of New Liberal Arts in Ningxia



Experts evaluate research tools and listen
carefully to and record expert advice

BIOGRAPHY

NAME Ms.Baoyun Liu

DATE OF BIRTH Mar 08,1980

PLACE OF BIRTH Tangshan City, Hebei Province, China

ADDRESS Yinchuan City, Ningxia Hui Autonomous Region, China

POSITION Lecturer

PLACE OF WORK North Minzu University

EDUCATION 2004 Bachelor Graduated from Hebei University, majoring in Chinese language and Literature, China
2008 Master Graduated from HebeiUniversity, majoring in Chinese philology, China
2013 Master Graduated from HebeiUniversity, majoring in Drama and Film Studies, China
2025 (Ph.D.) Doctor Degree of Educational Administration at Mahasarakham University, Thailand

