Intelligent Technology-Based Improvement of Teaching Ability of Professional Courses in Art Design

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Jing Peng
Baoji University of Arts and Sciences, Baoji, China
pengjing_82@163.com

Abstract—Despite the development of intelligent technology, there are many problems in the improvement of teaching ability of professional courses in art design, namely, the impact from multiple factors, the imperfectness of the evaluation index system, and the lack of quantitative analysis. To solve the problems, this paper probes deep into the connotations and influencing factors of the teaching ability of the said courses in the context of intelligent technology. Through theoretical analysis, several strategies were presented to improve the teaching ability of the said courses. To effectively evaluate the ability, the authors set up a robust evaluation index system from multiple angles, and provided a quantitative analysis model. The research results provide a good reference for art design teachers to improve their teaching ability.

Keywords—Teaching ability, art design, artificial intelligence (AI), professional courses, evaluation model

1 Introduction

Teaching ability is an important manifestation of teachers' comprehensive ability. It is also an important guarantee and basic condition for improving the quality and teaching effect of modern education. For this, many researchers have discussed and analyzed the improvement of teachers' teaching ability from different perspectives, which have a very good guiding role in improving the teaching ability [1-4]. The improvement of teachers' teaching ability is a complex and dynamic system. Especially with the rapid development of AI technology, its application in modern education is getting deeper and deeper. Thus, it has attracted wide attentions from researchers on how to effectively improve teachers' teaching ability in the context of intelligent technology [5-7]. Art design is an important part of modern education. Its professional course teaching involves more professional and domain knowledge, posing a more urgent demands for teachers' intelligent teaching ability. In view of this, many researchers discussed the improvement of the teaching ability of art design teachers in the context of intelligent technology. For example, Chen [8] studied the three-dimensional model of the connotation of the vocational school teachers' teaching ability under the background of "Internet +" and the relevant improvement strategies. Huang [9] taking the broadcasting and hosting art teachers as the research objects,

conducted research and analysis on the improvement of teacher-oriented innovation and entrepreneurship education teaching ability. Based on the theory of WSR method, Zhang [10] probed into an improved evaluation index system of rhythmic gymnastics teaching ability in sports colleges. Sawyer [11] discussed the creative teaching of art design, and performed an inductive analysis of related research results. Durmus [12] examined the instrumentalization of art through the similarities, commonalities and differences between philosophy and architecture disciplines, and used a method in basic design education as an example to explore new teaching and learning strategies. Chen [13] researched and analysed the application mode and application effect of VR technology in environmental art design teaching in applied universities. Qu [14] explored the training path of new young teachers in higher art colleges under the background of "double first-class" construction, and provided support for improving the teaching ability of young teachers in art colleges. As above, the improvement of the teaching ability of professional courses in art design is a complicated and systematic project. In this process, not only many influencing factors must be considered, but also effective evaluation and analysis of teaching ability are needed. Although the researchers have conducted in-depth discussions on relevant strategy analysis and method application currently, the related research results still have certain limitations in systematicity, operability and dynamic adaptation due to the continuous development of intelligent technology and modern education reform. To solve these problems, this paper first analyses the problems existing in the improvement of the teaching ability of professional courses in art design, and conducts further research on the improvement strategies of the teaching ability. Also, based on the entropy method [15 -16] and grey system theory [17-18], an improved evaluation model for the improvement of the teaching ability of art design courses was built.

This paper consists of 6 parts. The first part introduces and analyses the exiting problems with the improvement of the teaching ability of art design courses in the context of intelligent technology; the second part discusses the specific manifestation of the teaching ability of the said course; the third part analyses the factors affecting the improvement of the teaching ability; the fourth part presents related strategies to improve the teaching ability; the fifth part establishes an improved evaluation index system and evaluation model for the teaching ability; the sixth part gives the research conclusion of this paper.

2 Manifestation of the Teaching Ability of Professional Courses in Art Design in the Context of Intelligent Technology

2.1 Teaching philosophy

The teaching philosophy concentratedly reflects the educators' cognition of knowledge transfer and teaching process. It is also the view of educators on teaching activities, the basic attitudes and concepts held by educators on teaching activities. Teaching philosophy can be defined on the academic level, operational level, and theoretical level. In different eras, disciplines and majors also vary in terms of teach-

ing objectives, teaching activities, and organization structure, so that the teaching philosophy is dynamic. It has very important guiding significance for the implementation of standardized teaching activities and the improvement of teachers' professional teaching ability to encourage the educators to form teaching philosophy with clear training goals and characteristics of the times. Following the rapid development of AI technology, intelligent education has become an important component of modern education, and more and more intelligent education technologies have been applied in education [19-23]. Art education is an important part of modern education. Especially with the implementation of quality education, the role of art education has become more prominent, highlight the importance of the professional training in art design. Therefore, the new scientific and reasonable teaching philosophy for the professional talent training is an important manifestation of the teaching ability of professional course teachers in art design under the background of intelligent technology.

2.2 Teaching professional ability

According to the traditional cognition of teachers' basic professional ability, the teaching ability of professional course teachers in art design is reflected in many aspects, including the professional knowledge level, subject and professional development adaptability, professional curriculum teaching design and innovation ability, teaching evaluation and feedback ability, teaching and research integration ability, teaching social service ability, curriculum resource development ability, academic communication ability based on professional knowledge, and teaching process management ability. In the context of intelligent technology, the teaching ability of art design teachers needs to consider the influence and function of intelligent technology on the teaching ability, especially the art teachers' cognition and understanding of intelligent education technology, and the ability to use intelligent education technology. Its focus should be on the professional knowledge level, teaching adaptability, teaching innovation ability, teaching reform ability, teaching resource development ability and teaching management ability of professional course teachers in art design based on the intelligent education technology.

2.3 Teaching means and methods

With the continuous in-depth application and development of intelligent education technology in modern education, teaching means and methods of modern education have changed greatly. Traditional teaching means and methods have been difficult to satisfy the needs of modern education development. Therefore, in the context of AI technology, it is necessary to focus on the ability of art design teachers to use modern teaching means and methods. Traditional teaching means generally rely on printed textbooks, blackboards, and chalk, etc., while modern education teaching means require extensive application of audiovisual technology, multimedia technology, network technology, information technology, virtual reality technology, and computer Technology and so on based on the development of intelligent technology. Traditional teaching methods generally use lecture methods, classroom teaching methods, discus-

sion methods, and demonstration methods, etc., while modern education teaching methods also include independent learning, visit teaching, and task-driven teaching. Moreover, a series of intelligent teaching forms and platforms have emerged, such as MOOC teaching, cloud classroom, rain classroom, and flipped classroom. Therefore, the appropriate application of teaching means and methods is an important part of the teaching ability of professional course teachers in art design.

2.4 Management ability of teaching resources

In the context of intelligent education technology, various forms of professional curriculum teaching resources have begun to emerge. Especially due to the rapid development and application of AI technology, teaching resources in modern education have changed from traditional paper forms to electronic forms, and the amount of professional knowledge information shows an order-of-magnitude growth trend. The focus should be on the acquisition of effective professional knowledge and teaching content from numerous teaching resources. In this context, the management of professional course teaching resources in art design needs to consider the teachers' ability to plan, organize, summarize and organize, control and coordinate, and evaluate and feedback. Thus, the established teaching goals of art design courses can be realized.

2.5 Teaching effect

The teaching effect is the most intuitive and direct manifestation of the teaching ability of the art design teachers. It can manifest the consistency of the art professional training goals and teaching objectives, the completion of the art design professional curriculum teaching tasks and teaching progress, the satisfaction of the art design teaching effect, the rationality of art design professional curriculum knowledge transference, and the art majors' understanding and absorbing ability of course content. The measurement of the teaching effect can not only reflect the professional knowledge reserve ability of art design professional course teachers, but also the knowledge transfer ability. Under the background of intelligent technology, the attention should be paid to the promoting effect of intelligent technology on the improvement of teaching effect.

3 Factors Affecting the Improvement of the Teaching Ability of Professional Courses in Art Design in the Context of Intelligent Technology

3.1 Unclear positioning of professional talent training objectives

The unclear positioning of the talent training objectives has always been an important problem for the art design major. Especially with the continuous development of modern social art education and social education reform, it's uncertain to cultivate

elite art talents or professional art talents, as well as how to train art talents. Moreover, in the context of AI technology, the demands for art design professionals in modern society is constantly changing, which intensifies the market competition for art talents, and calls for the reform of modern education system urgently. However, due to the arbitrariness and uncertainty of the talent training for art design majors, it is difficult to orderly and systematically implement the teaching organization structure, teaching objectives and talent training, teaching task arrangements, and teaching content, making it difficult for professional teachers to focus on the teaching of professional knowledge. Therefore, it is very important to clarify the standards and connotations of training the art design professionals under the background of intelligent technology, formulate a complete teaching implementation plan of art design based on scientific research and reasonable arguments, and implement the training objectives of professional talents.

3.2 Insufficient comprehensive ability of professional course teachers

In the context of intelligent technology, not only has the intelligent teaching means and methods of modern education been greatly changed, but their updating speed is constantly increasing, which constantly deepens the concept of intelligent teaching, and develops various forms of new art design expertise. Especially due to the rapid development of AI technologies such as information technology and network technology, multiple types and forms of art design professional knowledge has been rapidly spread and shared. If the art design teacher cannot effectively master the relevant intelligent technology and fully absorb the new form of professional knowledge, it will seriously affect the comprehensive professional ability and level of the professional course teacher, and make them difficult to keep up with the pace of the times, which greatly affects the teaching ability of teachers.

3.3 Incomplete teaching management system

The implementation of teaching activities and teaching management of art design major are complementary. Teaching management can formulate corresponding rules and regulations for the implementation of teaching activities, which can be used to guide the teaching activities and ensure the orderliness and implement ability of teaching activities; the teaching activities can continuously improve the rules and regulations in teaching management through feedback of the problems in the art design teaching activities. Thus, the implementation of teaching activities and teaching management are mutually influenced and dependent, and both become closer especially in the context of intelligent technology. However, the current teaching management system of art design often only focuses on a single aspect, and ignores the integrity of teaching management and teaching activities, so that the teaching management system provide relatively limited support for the implementation of teaching activities, affecting the ability improvement of art design teaching.

3.4 Lack of in-depth understanding of intelligent education technology

The AI technology has a great promotion effect on modern education. It not only greatly enriches the knowledge reserve of modern education, but also effectively improves the teaching quality and teaching efficiency of modern education. From a development point of view, the perfect integration of AI and modern education can help the educators to grasp the future development direction of modern education, and intelligent education will be the inevitable trend of future education development. Therefore, intelligent education technology must be integrated into the teaching development of art design courses. Intelligent education technology is a necessary professional skill requirement for modern art design professional teaching. The AI technologies such as intelligent reasoning technology, knowledge search technology, knowledge modeling technology, database and knowledge base technology, inductive deductive technology, and association technology have broad application prospects in modern education. Modern intelligent education platforms and forms have solved some shortcomings and deficiencies in traditional education, but they still have some problems such as a relatively single content and methods, weak teaching management and control links, lack of in-depth intelligence, and insufficient popularization of the intelligent education concept. So, the professional course teachers have limited understanding and application of intelligent technology, and don't take the demands for intelligent teaching mode reform seriously enough. This will have a certain degree of influence on the improvement of the modern teaching ability of art design teachers.

4 Strategies for Improving the Teaching Ability of Art Design Professional Courses Based on Intelligent Technology

Due to a variety of constraints, it's difficult for the air design professional course teachers to reach an ideal professional teaching level under the background of intelligent technology. To effectively improve their teaching ability, the author proposed related strategies in the following aspects:

4.1 Promoting the comprehensive quality of art design teachers

The comprehensive quality of professional course teachers in art design is an important manifestation of their teaching ability. An art design teacher with good professional quality often has a relatively high level of teaching ability, and is more conducive to improving the teaching effect. In the context of intelligent technology, the improvement of the comprehensive quality of professional teachers in art design involves not only the intelligent education technology level and ability of these teachers, and the basic professional ability, but also the application ability of intelligent teaching methods and forms. Therefore, the said teaching ability should be improved through both the external interventions (such as professional teaching training, high-level academic exchanges, famous teachers or expert forums, technical practical teaching, and professional skills competitions) or internal digestion (such as inde-

pendent learning, teaching and research task-drive, experience exchange and reference). For qualified individuals or teams, both ways can be combined effectively to improve the teaching ability of art design teachers to a greater extent.

4.2 Improving the teaching management system of art design professional courses

The teaching management system is the main guarantee for the orderly implementation of the teaching activities in art design major. It is also the guiding direction for the sustainable completion of the course teaching tasks. Especially in the context of intelligent technology, it's important on how to better implement and develop the teaching plan of art design professional course. For this, the following tasks should be performed properly. First, clarify the important position of intelligent education technology in art design teaching, and formulate reasonable management rules and regulations for course teaching of art design major based on intelligent education technology; second, determine the teaching model based on intelligent education technology, formulate scientific and reasonable rules for the implementation of art design intelligent education, and ensure the smooth implementation of key teaching links; third, establish a sound professional course teaching training and reward/punishment mechanism under the background of intelligent technology to maximize the teaching ability of professional teachers.

4.3 Enhancing the teaching reform ability of art design teachers

The teaching reform ability is an important condition for the sustainable development of the teaching ability of professional teachers in art design. With the continuous development and application of artificial intelligence technology in the art design teaching, the society's demands for art talents are changing dynamically, which also poses urgent requirements for new art talents due to the development of intelligent education. Thus, it is necessary to carry out the professional course teaching reform in art design, cultivate the art talents adapting to the characteristics of the times, and then then improve the teaching ability and teaching adaptability of teachers. For this, in the process of teaching reform, on the one hand, art design teachers should be instilled with the concept of teaching reform, and the training of basic abilities in teaching reform should be strengthened; on the other hand, they should be encouraged to apply the teaching reform topics, which will improve their teaching ability through the in-depth research and analysis of reform topics.

4.4 Strengthening the social service ability of art design professional course teaching

Art is coming from life but above life. It is a cultural refinement of social labor and a spiritual cognition of the social development. That is, with strong social attributes, it learns theoretical foundation and practical experience from social development, but more importantly it also enjoys strong social service ability to promote social devel-

opment by serving the society, while social development will have a negative effect on artistic creation. In the environment of modern society, intelligent education technology and modern education have a very close interdependence relationship. Therefore, the professional course teaching in art design needs to consider its social serviceability, and conduct in-depth research on social development to strengthen analysis of society's demand for art design talents, and increase exchanges and cooperation with art design-oriented units, institutions and related art groups in society, thereby improving teachers' teaching ability at multiple levels, multiple angles and multiple directions.

4.5 Intensifying the development of art design teaching platforms and systems

The AI technology provides good technical support for the development of intelligent education platforms and systems. With the in-depth application of intelligent education technology in modern education, higher requirements have been also proposed for intelligent education platforms and systems. Through the analysis for the application effects of existing intelligent education platforms and systems, it can be found that on one hand, these platforms and systems can not only improve the sharing and dissemination ability of professional knowledge transfer, and effectively promote the teaching quality and teaching efficiency; on the other hand, they are more conducive to the management of professional knowledge, improves the manageability of professional knowledge, and promotes the application of professional knowledge. Due to its strong professionality and practicality, art design should also consider the upgrading of intelligent technology and the logical development characteristics of professional knowledge. The development of art design teaching platforms and systems under the background of intelligent technology needs to focus on the professionalism, operability, portability and systematicness of the art design course teaching platform and system.

4.6 Improving the teaching and research integration ability of art design teachers

The integration of teaching and research for art design teachers means organically combining the teaching activities of teachers with their scientific research topic, exploring the scientific issues of art design through the teaching activities, and then applying the scientific research results to art design teaching activities, to improve the teaching ability and teaching effect. It is a virtuous circle and an organic whole, which is useful for improving the teaching ability of art design teachers. Under the background of intelligent technology, the teaching and research integration ability of professional course teachers in art design can be improved in two ways: first, establish a good teaching and research integration mechanism, and form a development channel for teaching activities and scientific research projects from the perspective of subject and professional development; second, build a complete evaluation mechanism, encourage professional course teachers to conduct interdisciplinary, cross-professional, and cross-direction exploratory research, encourage professional course teachers to

conduct research and analysis through the industry-university-research integration, and make corresponding rewards and punishments.

5 Evaluation Model for the Improvement of Teaching Ability of Art Design Professional Courses

5.1 Establishment of index system

In summary, the teaching ability of art design teachers under the background of intelligent technology is affected by many factors. An effective evaluation index system needs to be established to measure the said teaching ability scientifically and objectively. This paper proposes to build the evaluation index system of teaching ability from four aspects: teachers' basic professional quality, design and innovation ability, implementation and execution ability, and teaching effect of professional course teaching.

Teachers' basic professional quality: This sub-system mainly focuses on the basic professional ability of art design e teachers under the background of intelligent technology. Its evaluation indicators were selected from the following: cognition of intelligent education technology, the ability to master and apply intelligent technology, professional curriculum planning ability, professional knowledge reserve ability, professional curriculum teaching planning ability, rationality of formulated teaching schedule, scientificity of teaching task planning, and richness of teaching content, whether they have senior professional titles or high degrees, teaching attitude, teaching manner and image.

Professional course teaching design and innovation ability: The sub-system of professional course teaching design and innovation ability is mainly to investigate the teaching creativity of art design teachers under the background of intelligent technology. The evaluation indicators were selected from the following: the use of teaching means, selection of teaching methods, the reform of teaching model, the compilation of quality textbooks for professional courses, the number of teaching reform topics undertaken, the level and number of teaching reform papers, the creative ability of professional skills, the guidance and commitment of professional skills competitions, the integration of teaching and scientific research, expanding capacity of professional courses, the number of scientific research projects undertaken, and the level and number of published scientific papers and patents.

Implementation and execution ability of professional course teaching: This subsystem mainly refers to the teaching operability of art design teachers under the background of intelligent technology. Its evaluation indicators were selected from the following: the control ability of teaching progress and the teaching atmosphere, the ability to use the teaching language, the ability to impart professional knowledge and skills, the ability to manage the teaching process, the cultivation of student teamwork ability, the cultivation of student innovation ability, the cultivation of students' independent learning ability, the cultivation of student observation ability, the cultivation of student appreciation ability and the cultivation of students' practical ability.

Professional course teaching effect: The sub-system of professional course teaching effect mainly emphasizes the teaching results of art design teachers under the background of intelligent technology. Its evaluation indicators was selected from the following: the qualification rate of art professionals, the excellent rate of art professionals, the number of professional courses, the participation of professional intelligent teaching platforms and system development, the commitment of high-level academic conferences in the professional field, the participation and exchanges of high-level academic conferences in the professional field, the number of students participating in the competition, and the number of awardees in student competition, students' professional knowledge and skill level, teaching awards, scientific research awards, teaching reform results and the transformation of scientific research results, social practice and service, social satisfaction, student satisfaction, expert evaluation satisfaction, etc.

5.2 Processing of evaluation indicators

Based on the evaluation index system above, the survey and statistical analysis were conducted for the evaluation objects to obtain corresponding index values. For better discussion, it's assumed that the number of evaluation objects is m, the number of evaluation indicators is n, and the value of the j-th evaluation indicator for the i-th evaluation object is v(ij). If the j-th evaluation indicator is a positive index, i.e., the larger the better, then its standardized value r(ij) is given as:

$$r(ij) = \left(v(ij) - \min_{1 \le i \le m} v(ij)\right) / \left(\max_{1 \le i \le m} v(ij) - \min_{1 \le i \le m} v(ij)\right) \tag{1}$$

If the j-th evaluation indicator is a negative index, i.e., the smaller the better, then the standardized value r(ij) is given as:

$$r(ij) = \left(\max_{1 \le i \le m} v(ij) - v(ij)\right) / \left(\max_{1 \le i \le m} v(ij) - \min_{1 \le i \le m} v(ij)\right) \tag{2}$$

Considering that different evaluation indicators often have different weights, this paper adopts the entropy method [24-26] to weight the evaluation indicators. On the premise of obtaining the standardized value of the j-th evaluation index for the i-th evaluation object, the proportion of the i-th evaluation object in the evaluation index is:

$$p(ij) = r(ij) / \sum_{i=1}^{m} r(ij) \tag{3}$$

The entropy value of the j-th evaluation indicator for the teaching ability of the art design professional course is expressed as:

$$e_j = -\sum_{i=1}^{m}\left(p(ij) * \ln p(ij)\right) / \ln m \tag{4}$$

At 1/lnm>0, it satisfies ej>0.

As above, we obtained the difference dj in entropy value of the j-th evaluation indicator, namely:

$$d_j = 1 - e_j \tag{5}$$

Then, the weight of the j-th evaluation indicator for the teaching ability in art design can be expressed as

$$w_j = d_j / \sum_{j=1}^{n} d_j \quad , \quad j = 1, 2, \cdots, n \tag{6}$$

Thus, 0≤wj≤1, and $\sum_{j=1}^{n} w_j = 1$. And the weight sequence of the evaluation indicator can be expressed as:

$$\boldsymbol{W} = \left(w_1, \cdots, w_j, \cdots, w_M\right) \tag{7}$$

5.3 Implementation of the evaluation model

After obtaining all standardized value of the evaluation indicators for the evaluation objects, the authors took the maximum value of the j-th evaluation indicator, and further obtain the positive ideal sequence R+(j) of the evaluation index set:

$$R^{+}(j) = \left(\max_{1\le i\le m} r(i1), \cdots, \max_{1\le i\le m} r(ij), \cdots, \max_{1\le i\le m} r(in)\right) \tag{8}$$

Similarly, take its minimum value, and then obtain the negative ideal sequence R-(j) of the evaluation index set:

$$R^{-}(j) = \left(\min_{1\le i\le m} r(i1), \cdots, \min_{1\le i\le m} r(ij), \cdots, \min_{1\le i\le m} r(in)\right) \tag{9}$$

Based on the gray correlation analysis method [27-30], it can be seen that the positive gray correlation coefficient η+(ij) of the j-th evaluation indicator between the i-th evaluation object and the positive ideal sequence R+(j) is given as:

$$\eta^{+}(ij) = \frac{\min\limits_{i}\min\limits_{j}\left|r_{ij} - \max\limits_{1\le i\le m} r_{ij}\right| + \beta \max\limits_{i}\max\limits_{j}\left|r_{ij} - \max\limits_{1\le i\le m} r_{ij}\right|}{\left|r_{ij} - \max\limits_{1\le i\le m} r_{ij}\right| + \beta \max\limits_{i}\max\limits_{j}\left|r_{ij} - \max\limits_{1\le i\le m} r_{ij}\right|} \tag{10}$$

where, β is the resolution coefficient.

Similarly, the negative gray correlation coefficient η-(ij) between the i-th evaluation object and the negative ideal sequence R-(j) is given as:

$$\eta^{-}(ij)=\frac{\min\limits_{i}\min\limits_{j}\left|r_{ij}-\min\limits_{1\le i\le m}r(ij)\right|+\beta\max\limits_{i}\max\limits_{j}\left|r_{ij}-\min\limits_{1\le i\le m}r(ij)\right|}{\left|r_{ij}-\min\limits_{1\le i\le m}r(ij)\right|+\beta\max\limits_{i}\max\limits_{j}\left|r_{ij}-\min\limits_{1\le i\le m}r(ij)\right|} \tag{11}$$

Combining with the index weighting method given above, the positive gray correlation degree ψ+(i) between the i-th evaluation object and the positive ideal sequence R+(j) is given as:

$$\psi^{+}(i)=\sum_{j=1}^{n}\left(w_j*\eta^{+}(ij)\right) \tag{12}$$

Similarly, the negative gray correlation degree ψ+(i) between the i-th evaluation object and the negative ideal sequence R-(j) is given as:

$$\psi^{-}(i)=\sum_{j=1}^{n}\left(w_j*\eta^{-}(ij)\right) \tag{13}$$

From this, the authors obtained the comprehensive weighted gray correlation degree ψ(i) of the i-th evaluation object:

$$\psi(i)=1/\left(1+\left(\frac{\psi^{-}(i)}{\psi^{+}(i)}\right)^{2}\right) \tag{14}$$

Assuming that the gray correlation threshold ψ(o) for evaluating the teaching ability improvement of art design professional courses under the background of intelligent technology is ψ(o), if ψ(i)≥ψ(o), then it indicates that the i-th evaluation object satisfies the requirements in teaching ability; otherwise, relevant strategies are required to improve the teaching skills of the evaluation objects.

6 Conclusion

This paper aims to study the improvement of the teaching ability of professional course in art design in the context of intelligent technology. For this, it analyses the problems existing in the process of improving the teaching ability of the said course, and discusses the manifestation of the teaching ability. Then, the factors affecting the improvement of professional course teaching ability were analysed in depth, and relevant strategies were proposed to deal with these problems. This provides a good

support for effectively improving the teaching ability of art design teachers. Meanwhile, in order to better measure the teaching ability of art design professional courses, this paper establishes an evaluation index system and quantitative analysis model based on the intelligent technology, which is of great guiding significance for the improvement of professional course teaching ability in art design.

7 References

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8 Author

Jing Peng is a teacher at Baoji College of Arts and Sciences. She specializes in design theory research and is responsible for teaching visual communication design. Her research focus is on the diversification and innovation of art design education.

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