# Research on the quality improvement strategy of online training for teachers based on the ARCS model

## Yuzhe Liu[1], Wang Yang[2]

[1]Jungwon University, South Korea. 85, Mumu-ro, Goesan-eup, Goesan-gun, Chungbuk, 28024, Republic of Korea
[2]Northeast Petroleum University, Daqing, Heilongjiang, 163318, China

**Abstract:** At present, many teachers lack good enthusiasm and less learning investment in training, resulting in unsatisfactory training quality, and online training is even more difficult to stimulate the enthusiasm of training participants, and the ARCS model, based on the breakthrough of learners' internal learning motivation, promotes learners' interest to be stimulated, so that they can increase learning investment, and then achieve good results, so the application of ARCS mode to teacher online training is of great significance and value to promote the quality of online training. Based on this, this paper first briefly introduces the ARCS model, then analyzes the principles that should be followed in online training for teachers based on the ARCS model, and finally elaborates on the design of online training for teachers in the ARCS model, respectively, from the emphasis on the improvement of learning attention of participating teachers. Enhance the learning relevance of participating teachers; Strengthen training services to enhance the self-confidence of participating teachers; Strengthen evaluation and feedback, and promote the improvement of learning satisfaction of participating teachers, and put forward a strategy to improve the quality of online training for teachers based on the ARCS model.

**Keywords:** ARCS mode; Online teacher training; Principle; Promotion policy

## 1. Introduction

From the perspective of teacher training, the traditional model still cannot adapt to the rapid development of social needs and the requirements of improving teachers' ability and level because of its many drawbacks. With the rapid development and application of the Internet, online training based on "Internet +" provides a new platform for teacher training, creates new paths and opportunities, and effectively solves the drawbacks of traditional centralized training. It can be seen that the scope of influence and application fields and influence of online training on the improvement of teachers' teaching ability and teacher professional development are constantly expanding, but it cannot be ignored that whether online training can really play a good role in promoting the development of teachers and the degree of promotion effect are important topics worth exploring. At present, many teachers lack good enthusiasm and less learning investment in training, resulting in unsatisfactory training quality. The ARCS model, based on the breakthrough of learners' internal learning motivation, promotes learners' interest to be stimulated, so that they can increase the investment in learning, and then achieve good results, so the application of ARCS mode to teachers' online training is of great significance and value for promoting the quality of online training. [1]

## 2. A brief overview of the ARCS model

The so-called ARCS model, that is, the motivational design model, was proposed by Professor John M. Keller of Florida State University in the United States and verified after a long period of teaching practice and instructional design work. This model mainly defines the four key factors of the subject's internal motivation formation, which can be divided into four aspects: Attention, Relevance, Confidence and Satisfaction. Among them, Attention, refers to the learner's attention to what they have learned and has interest, and has paid attention to it; Relevance refers to the relationship between learning objectives, learning content and learners' learning needs, and to a certain extent, there is the value and significance of learning; Confidence, which refers to the learner's confidence in achieving the learning task; Satisfaction refers to the satisfaction of learners in terms of learning outcomes, and feels

that learning promotes personal improvement and growth, which is a key element in maintaining learners' motivation to learn. The ARCS model holds that if a learning task is value-related to the learner's needs, and the individual has positive expectations of success, the attention of the learning task is more concentrated in the process of participating in the learning task. [2]

## 3. The principles to be followed in online training for teachers based on the ARCS model

Online teacher training is not an isolated and simple process, and in the process of constructing the ARCS model, it is necessary to consider not only how to teach effectively, but also how to effectively stimulate and maintain learners' interest and motivation. To this end, online training for teachers based on the ARCS model should follow the basic principles of effective training and motivation.

### 3.1. The principle of effective training

The principle of effective training mainly refers to the effectiveness of learners' participation in training learning and the effectiveness of training teachers.

First of all, from the perspective of the teachers participating in the training, whether they have learned effectively can be judged in terms of participation time, learning results and learning experience. From the perspective of time, it is necessary to directly judge not only the time for participating teachers to participate in training and study, but also the quality of learning achieved during the learning time. From the perspective of learning results, it is necessary to judge whether students have achieved the indicators that should be completed in learning, specifically including the relevant knowledge, skills and achievements that should be mastered during the training. From the perspective of the learning experience, what is presented is the feeling of participating teachers about online training, which has often not been paid attention to in traditional training in the past. The learning experience is a reflection of the satisfaction obtained in the training of participating teachers, and only when the participating teachers produce a good learning experience will they learn more consciously in the subsequent training. [3]

Secondly, from the perspective of training teachers, it mainly depends on whether their teaching is effective teaching or invalid teaching. For participating teachers, ineffective teaching cannot reflect the value of training, and may also affect the enthusiasm of participating teachers to learn. Therefore, teachers should try to teach effectively in online training based on the ARCS model. [4]

### 3.2. The principle of motivation stimulation

Motivation is the intrinsic drive of an individual to maintain a certain behavior and to achieve a certain purpose. Subject literacy, teaching ability and the application of information technology are the main needs of teachers to participate in online teaching training, and the formation of learning behaviors such as their own teaching ability and other goals are improved, so the participating teachers present a positive learning psychology in the training process. Always adhere to the principle of motivation, so that the participating teachers can maintain a positive learning attitude during the training process. Combined with the sources of motivation, including internal and external motivation. The so-called intrinsic motivation refers to the learning behavior made by the participating teachers for the improvement of individual ability, while the external motivation refers to the learning behavior implemented by the participating teachers to obtain certain external rewards. [5] Therefore, in the process of online training for teachers based on the ARCS model, we should pay attention to the effective stimulation of the internal and external motivation of participating teachers. During the training, the instructor should select the training objectives and training content related to the actual work of the participating teachers, so as to stimulate their internal learning motivation, and use the positive evaluation of the learning process and learning effect and the corresponding external rewards to stimulate their learning motivation, so as to realize the combination of internal and external motivation and promote the improvement of online training effect.

## 4. Design and quality improvement strategy of online teacher training based on ARCS model

### 4.1. Analysis of motivation issues

In the motivation analysis stage, the most important thing is to clarify the motivational goals and

analyze the structure of the participating teachers. First of all, from the perspective of clear motivation and goals, it is expected that teachers can have a good understanding and mastery of relevant skills, advanced educational concepts, teaching methods, etc. through online training, so that the meaning and value of online training can be fully reflected. Second, analyze the structure of the participating teachers. That is, to understand the learning foundation of participating teachers, the cognition and attitude of online training, etc., so as to carry out online training in a more targeted manner.

### 4.2. Motivation strategy design

According to the ARCS model, online teacher training can design motivational strategies from four elements: Attention, Relevance, Confidence, and Satisfaction.

### 4.2.1. Attention

Attention is the basis for the effective implementation of the learning activities of the participating teachers. From the perspective of categories, attention mainly includes intentional attention and unintentional attention. To promote the improvement of the effectiveness and quality of teachers' online training, it is necessary to ensure that the intentional attention of participating teachers is mobilized during the training process, so as to stimulate and maintain their learning motivation. In this design, the use of both the arousal and maintenance of attention is emphasized as a method to stimulate and maintain the attention of the participating teachers. On the whole, training should be carried out in combination with the teaching ability and technical methods that participating teachers should master, so as to stimulate the motivation of participating teachers to explore problems. From the perspective of learning resource support, the web-based electronic materials provided according to the training program and training content can also receive the purposeful attention of the participating teachers. From the perspective of expression, the use of video and other highly sensory methods to carry out teaching can more easily arouse the attention of participating teachers. In addition, asking challenging questions stimulates and mobilizes participants' curiosity and awareness of intellectual inquiry. [6]

### 4.2.2. Relevance (relevance)

Relevance usually includes both process-related and purpose-related. In terms of purpose correlation, it mainly means that the content learned is very beneficial to the realization of a certain purpose of the participating teachers, and their learning motivation will be effectively stimulated. Therefore, how to meet the training needs of participating teachers to the greatest extent is an important issue in online teacher training. The first in this design is to use various communication channels, such as notification and explanation on the training website or official account, so that the participating teachers can understand the value of the training, and through the collection of the opinions of the participating teachers, and some participating teachers jointly formulate the goals to be achieved by the training. Process correlation is mainly to present the learning feelings of participating teachers in the online training process, and when the participating teachers feel that they have a good emotional feeling in learning, their learning motivation can be stimulated. Therefore, how to link the training activities with the existing experience of the participating teachers is an important issue to consider in the online training process. Based on this, real and concrete scenarios can be applied to the learning environment and supported from the aspect of online virtual classrooms, so that the participating teachers can improve their sense of familiarity. [7]

### 4.2.3. Confidence

Confidence comes from valuable success. In order to better enhance the enthusiasm of participating teachers, online teacher training must build more self-confidence. First, the relevant requirements, qualification standards and assessment basis of the training can be clearly explained to the participating teachers to help them build expectations for success. Second, in view of how to make participating teachers build confidence in their own abilities, this design adopts the training content to be divided according to the degree of difficulty to carry out training, so that teachers can gradually improve the learning confidence of participating teachers through the completion of each task.

### 4.2.4. Satisfaction

When the learning results of the participating teachers are consistent with their expectations, they will be psychologically satisfied with the training. Generally, there are two ways to obtain teacher satisfaction: one method comes from the outside, for example, before the start of each online training, the participating teachers can be required to sign in for online training, and certificates can be issued to them according to the performance during the training period and the training results, so that the efforts

of the participating teachers can be recognized and satisfied in the external form. The other is internal, that is, by creating a good online learning environment for participating teachers and giving strong support to their online training and learning, etc., to promote their psychological satisfaction. In addition, through regular training opinion collection and feedback, we can better understand the learning needs of participating teachers, so as to help the training practices of participating teachers to be unified with their learning goals. [8]

## 5. Strategies for improving the quality of online teacher training based on the ARCS model

Combined with the above motivation problem analysis and motivation strategy design, the improvement of online training quality of teachers based on ARCS model can focus on the improvement of learning attention from participating teachers. Enhance the learning relevance of participating teachers; Strengthen training services to enhance the self-confidence of participating teachers; Strengthen evaluation and feedback, and promote the improvement of learning satisfaction of participating teachers.

### 5.1. Pay attention to the improvement of the learning attention of participating teachers

Attention, an important component of learning ability, allows individuals to pay attention to and learn the aspects they are interested in, which is the foundation and important prerequisite for effective learning. Based on how to use the training content and training methods under the ARCS mode, the conscious attention of the participating teachers can be stimulated, and the desire for inquiry of the participating teachers can be aroused, which has become the key to activating the internal learning motivation of the participating teachers.

### 5.2. Enhance the learning relevance of participating teachers

Individuals have limited attention, and most people consciously pay sustained attention to things that match their experiences, abilities, and expectations. Online training based on the ARCS model can only generate the internal driving force of training and learning if the participating teachers truly understand the important value of online training for their future career development, and experience the close relationship between training and learning and their own career development. To this end, in the process of online training for teachers, it is necessary to find the correlation between online training projects and the needs of participating teachers through the understanding and analysis of the training needs of participating teachers, and then explore the specific relationship between online training and the learning of participating teachers. [9]

### 5.3. Strengthen training services to promote the enhancement of self-confidence of participating teachers

Under the ARCS mode, the self-confidence of participating teachers is an important factor influencing whether their training and learning tasks can be completed and achieve good learning results. Confident participating teachers tend to learn better online. Based on this, this study believes that the optimization of training services can promote the improvement of self-confidence of participating teachers, so that they can pay enough attention to the importance and value of online training and learning, and make reasonable use of the advanced education teaching concepts and teaching technologies they have learned. To this end, in the process of online training, it is first necessary to pay attention to the online learning of the participating teachers. Online training and learning must rely on the strong support of network and information technology. When participating teachers carry out training and learning services, they should give certain help in network and information technology applications, and at the same time build interconnection between learning resources and support resources, and provide corresponding help to teachers with interpersonal support needs. Secondly, for learners, whether they can feel the value and effectiveness of online training is an important factor affecting their learning quality and satisfaction. If the training content or training method can make the participating teachers feel practical or novel and effective, they will more consciously find the relationship between the two, enhance their confidence in training and learning, and promote the improvement of training quality. [10]

### 5.4. Strengthen evaluation and feedback to promote the improvement of learning satisfaction of participating teachers

In order to achieve better training quality and effect in online teacher training based on the ARCS model, we must pay attention to training feedback and optimization. When the participating teachers have a positive evaluation and positive feedback on the training, their training goals can be achieved, and the training will be recognized and satisfied by the participating teachers. Based on this, in the process of online training, it is first necessary to evaluate the learning process and learning results of the participating teachers fairly and impartially, and give them timely encouragement from a positive direction. Secondly, we should pay attention to guiding the participating teachers so that they can consciously apply the results of learning in practical work. Thirdly, we should pay attention to giving appropriate incentives and positive evaluations to the participating teachers, and at the same time understand the training related evaluations and feedback of the participating teachers, and then optimize and adjust the training in combination with the feedback, which is very beneficial to improve the training and learning satisfaction of the trainee teachers. At the same time, in the process of evaluating the training content and related aspects, the participating teachers will also be aware of their own training and learning, and then improve and make up for the existing deficiencies.

However, it should be noted that the progress made by all participating teachers in online training should be positively evaluated and affirmed. At the same time, positive evaluation does not mean that there are only simple incentives, but that fair, impartial and objective evaluation should be carried out, and sufficient attention should be paid to the presentation of evaluation. In the process of online training, the advantages of online training can also be fully utilized, such as through information visualization technology or big data technology, etc., to promote the improvement of learning satisfaction of participating teachers, and the improvement of teachers' online training effect and quality. [11]

## 6. Conclusion

In short, the online teaching of teachers based on the ARCS model pays attention to the addition of the intrinsic learning motivation of participating teachers, and understands the impact of the four aspects of attention, relevance, confidence and satisfaction on online training. As a training teacher, the design and quality of online training for teachers in ARCS mode should be strengthened on the basis of a correct understanding of the principles that should be followed in online training for teachers under the ARCS model.

## References

*[1] Roach (2021). Research on teachers' micro-lesson skills training measures from the perspective of ARCS model [J].Wireless Internet Science and Technology, (2):pp160-161.*
*[2] HU Shan, DING Yong, GAN Maohua (2012). Application of ARCS model to multimedia teaching equipment skills training for college teachers [J].Modern Educational Technology ,(2):pp70-78.*
*[3] Li Yan (2019). Research on MOOC Course Design and Development Model of Teacher Training from the Perspective of ARCS[J]. Education Communication and Technology ,(2):pp56-59.*
*[4] Wu Jun, Wei Lanyong, Qin Fuli(2021). Construction and exploration of online teaching and training evaluation system for college teachers[J].Higher Education Forum ,(7):pp49-51.*
*[5] Bai Bing(2017)." The value, problems and countermeasures of "Internet + vocational teacher training": A case study of secondary vocational education in Henan Province[J].Vocational and Technical Education ,(23):pp60-63.*
*[6] Zeng Lingzhi. The "six-dimensional" design of online live courses--- taking online live training in Longgang District Teacher Professional Development Base School as an example[C].Proceedings of the 4th Teaching Seminar of Guangdong Continuing Education Association,2021-11-06.*
*[7] Lv Hang, Xiao San(2021). Research on online teaching ability training strategy of college teachers in the post-epidemic era[J].Economic Research Guide,(33):pp107-109.*
*[8] ZHANG Yutao(2019). Research on training mode of information teaching ability based on ARCS model [D].Beihua University.*
*[9] WANG Wenji, HAN Han(2020). Practice and research of online teaching information technology training for teachers in network environment[J].Science and Education ,(33):pp42-43+58.*
*[10] Liu Yang (2021). Discussion on online and offline connection strategies for teacher training under*

*the background of the Internet[J]. Xue Zhou, (23):pp171-172.*

*[11] Liu Yuan(2019). Research on micro-lesson skills training strategy for primary school teachers based on ARCS model[D]Qufu Normal University.*