

An Empirical Study on Applying the ARCS Model to College English

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Abstract: *At present, Chinese college English teaching advocates establishing a curriculum system featuring student-centered learning and demand-oriented. Cultivating their interest in learning English, and building self-confidence. It has become the focus of current teaching research. Most of the previous studies about learning motivation in China are based on theory rather than practice. Therefore, based on the ARCS model, this paper takes sophomore undergraduates of Sichuan University of Media and Communications as the experimental research objects and obtains experimental data through questionnaires and comparative experiments to prove that the ARCS model applies to college English teaching in art colleges. It is committed to providing a more comprehensive understanding and method for improving student learning motivation and contributing wisdom to the reform and development of Chinese college English teaching.*

Keywords: *the ARCS model, college English, teaching method*

1. Introduction

The ARCS model is a new teaching method proposed by American professor J.M.Keller. Different from other motivational models, the ARCS model is a macro theory combining motivation theory with behaviorist psychology, the research of cognitive psychology, and information processing to explain teaching activities. Professor Keller believes that 16-20% or even 30% of students' performance is caused by learning motivation^[3]. Therefore, it is very necessary for course designers and instructors to understand the principle of motivation and its application in the teaching process. According to Maslow's hierarchy, needs are categorized into a hierarchy, in which certain needs must be met before others^[2]. Self-actualization, as the highest need in the theory, explains the basic problem of human motivation. Self-actualization is the motivation psychology triggered by a human's desire to develop and realize their potential after the lack of needs is satisfied. On the other hand, a person's motivation is not only realized by internal expectations, but also by external stimuli. So, in combination with Maslow's hierarchy and other 11 motivation theories, Pro. Keller proposed a theory to stimulate intrinsic and external motivation. One commonly used motivational design model is the attention, relevance, confidence, and satisfaction (ARCS) model. Besides, the ARCS model is rooted in a theoretical foundation: the expectancy-value theory^[1].

The first condition, attention, is a prerequisite for learning. To arouse students' interest in the teaching process, teachers need to stimulate and maintain students' attention through novel topics and interesting content, as well as a variety of strategies.

As for relevance, one factor is relevance related to purpose: teachers should help students understand the purpose of learning, and know that the learning content and tasks have a close relationship with their grades and future development after arousing their curiosity. The other factor is relevance related to process: teachers let learners realize the value of learning content in the learning process through high-quality content, which encourages the positive development of learning motivation.

Confidence is the third element of the motivational model. Confidence is very important in the teaching process. If students have expectations for success and are confident that they will succeed in the task given by teachers, they will stick to the tasks. On the contrary, if they believe there was little chance of success, they will choose to give up. Therefore, teachers choose interrogative sentences to maintain interactive communication and use imperative sentences to weaken the tone, encouraging students to think more and explore in depth. In language, more low-value modal verbs are used to express teachers' attitudes and influence students' attitudes and behaviors, which enhances students'

achievement motivation and self-efficacy expectation.

Satisfaction, the last element of the model, affects the maintenance of motivation. Therefore, it is necessary to constantly create satisfaction in the teaching process to maintain learning motivation. Therefore, teachers not only carry out external motivation like verbal praise or material rewards but also make students' satisfaction with the final score become the internal motivation.

The model states that, in order to motivate students, the instructor or instructional materials need to (1) catch and sustain students' attention; (2) state why the students need to learn the content; (3) make students believe that they are able to succeed if they exert effort; and (4) help students feel a sense of reward and pride^[1].

2. Experimental design and research of the ARCS model

In order to improve the quality of English teaching and arouse students' enthusiasm for learning English, the following part is aimed to verify the effectiveness of the ARCS model in English Teaching for the students at art college through the experimental data of final score and questionnaire survey.

2.1 Motivation analysis

The research objects are 100 sophomores majoring in broadcasting and hosting at the Sichuan University of Media and Communication (hereinafter referred to as the SUMC). They are 19-21 years old and have similar English proficiency. Their English scores on the college entrance examination are in the range of 70-90. Most of the students at art college are outgoing, lively, and creative. Besides, they are good communicators and are eager to be recognized for their accomplishments. In spite of this, they do not seem to be very motivated to learn English. The root cause is the poor English foundation caused by the disregard of English learning in secondary school, on the other hand, absence of association among English and their majors studied in university is another reason resulting students' lack of interest in English learning.

In terms of educational content, all 100 research objects were taught volume 3 of 21st Century College English (3rd Edition). Each unit of the textbook consists of five parts: listening, reading, speaking, translation and writing. Among them, the reading section including Text A (intensive reading), after-class exercises, translation, and writing are the key points and difficulties of learning, and students' mastery of these parts will affect their final exam scores.

2.2 Experimental design and strategy

At the beginning of the semester, 100 students were divided into the experimental group (50) and the control group (50). In one semester, the teacher used the ARCS model in the experimental class. In the teaching process, she strictly followed the attention, relevance, confidence, and satisfaction strategy in the ARCS model to help students generate positive emotions, improve and maintain learning motivation, establish appropriate learning objectives and cultivate scientific learning methods. The control group follows a non-motivation strategy that teachers meet the syllabus directed by the school, adopting traditional teaching methods.

At the end of the term, the results of the final exam of the two classes were compared horizontally. In the meanwhile, The results of the experimental class in two semesters were longitudinally matched since the final exam results can directly affect students' satisfaction.

Further research might tell us whether the learning motivation of students under this model is improved. This questionnaire ("College English Learning Motivation Questionnaire of Sichuan University of Media and Communication") (Appendix A) refers to the existing motivation measurement scale and the content of the CIS (Curriculum Interest Survey) scale proposed by Pro. Keller. The questionnaire with 10 questions is divided into four levels: A(attention) level, R (relevance) level, C (confidence) level, and S (satisfaction) level, each level contains 2-3 questions. There are five grades for each question, which are "Strongly agree" (5 points), "Agree" (4 points), "Neither agree nor disagree" (3 points), "Disagree" (2 points) and "Strongly disagree"(1 point). After reading each question, students should fill in the corresponding score according to their own actual situation.

3. Analysis of experimental results

After implementing the ARCS motivational model strategy, the designer summarized and analyzed the final scores of experimental subjects and questionnaires result.

By comparing the data (Table 1), it can be found that the average final score of the experimental group without the ARCS model is 57.49 in the semester of 2021-2022-1, while in the semester of 2021-2022-2, the average score of the experimental with the guidance of the ARCS model is 68.69, an increase of 16.31%. At the same time, through horizontal comparison, it is found that the average final scores of the experimental and the control group in the 2021-2022-2 semester are both improved, while the total scores, as well as each item's score of the experimental group, were significantly higher than those of the control after the implementation of the model, and the final scores were 9.59 points higher than those of the control.

Table 1: Average final score

| Semester | Research Subject | Listening(20) | Vocabulary (10) | Reading (40) | Translating (15) | Writing (15) | Total(100) |
|-------------|--------------------|---------------|-----------------|--------------|------------------|--------------|------------|
| 2021-2022-1 | experimental group | 10.34 | 6.43 | 22.46 | 8.34 | 9.92 | 57.49 |
| | control group | 10.02 | 6.77 | 21.47 | 8.35 | 9.85 | 56.46 |
| 2021-2022-2 | experimental group | 12.52 | 8.42 | 27.93 | 9.26 | 10.56 | 68.69 |
| | control group | 11.45 | 7.02 | 22.66 | 8.09 | 9.88 | 59.1 |

In order to further verify the ARCS motivation, the experimenter conducted the same questionnaire survey on 100 students of the two classes at the end of the semester to understand the change in students' learning motivation level through the Likert scale (Table 2).

Table 2: Questionnaire Analysis

| Question | Research Subject | N | Minimum | Maximum | Mean | Std. Deviation |
|----------|--------------------|----|---------|---------|------|----------------|
| A1 | experimental group | 50 | 2 | 5 | 4.52 | 0.863 |
| | control group | 50 | 2 | 5 | 3.64 | 0.964 |
| A2 | experimental group | 50 | 2 | 5 | 4.32 | 0.957 |
| | control group | 50 | 1 | 5 | 3.16 | 1.503 |
| A3 | experimental group | 50 | 2 | 5 | 4.28 | 1.011 |
| | control group | 50 | 1 | 5 | 3.84 | 1.235 |
| R1 | experimental group | 50 | 2 | 5 | 4.48 | 0.886 |
| | control group | 50 | 2 | 5 | 3.74 | 1.026 |
| R2 | experimental group | 50 | 2 | 5 | 4.36 | 0.898 |
| | control group | 50 | 1 | 5 | 3.46 | 1.474 |
| R3 | experimental group | 50 | 2 | 5 | 4.4 | 0.948 |
| | control group | 50 | 1 | 5 | 3.46 | 1.343 |
| C1 | experimental group | 50 | 2 | 5 | 4.24 | 1.021 |
| | control group | 50 | 1 | 5 | 3.2 | 1.161 |
| C2 | experimental group | 50 | 2 | 5 | 4.38 | 0.923 |
| | control group | 50 | 1 | 5 | 3.6 | 0.948 |
| S1 | experimental group | 50 | 2 | 5 | 4.22 | 1.036 |
| | control group | 50 | 1 | 5 | 3.6 | 0.969 |
| S2 | experimental group | 50 | 2 | 5 | 4.62 | 0.667 |
| | control group | 50 | 2 | 5 | 4.26 | 0.876 |

According to the data in Table 2, the proportion of all questions in the questionnaire in the experimental group is higher than that in the control group, indicating that the learning motivation of the experimental group is generally higher than that of the non-motivation class after a semester of motivation model education. From the above research, it can be concluded that the motivation level and final score of the experimental group were significantly improved, while the average score of the control group was also improved, but not significantly. It shows that the ARCS motivation model has a significant effect on stimulating the learning motivation of college English in media colleges.

4. Conclusion

Under the background of globalization, English, as the most widely used language, plays a prominent role in social communication. English teaching has changed from the traditional teaching model to practical teaching. As a compulsory public course, college English in the SUMC has strong practicability and is beneficial to students' future development. However, due to the lack of a certain language environment, attention, and professional relevance, students generally do not have high motivation in English learning. The ARCS model is a well-developed model with clear steps and guidelines, as Keller pointed out: "the ARCS Model appears to provide useful assistance to designers and teachers, and warrants more controlled studies of its critical attributes and areas of effectiveness"^[1]. This paper discusses the feasibility of applying the ARCS motivation model to English teaching in the SUMC. By linking theory with practice, teachers pay attention to pre-class preparation, collect various resources and integrate them into teaching design to attract students' attention. Secondly, the relevance between teaching content and students' majors should be emphasized in the classroom demonstration. Thirdly, in classroom teaching, we should pay more attention to the use of low-value modal verbs and use imperative sentences to weaken the tone. Finally, improve the after-school evaluation system to enhance student satisfaction.

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References

- [1] Keller, J. M. (1987a). *Development and use of the ARCS model of instructional design*. *Journal of Instructional Development*, 10(3), 2–10.
- [2] Maslow, A. H. (1943). *A theory of human motivation*. *Psychological Review*, 50(4), 370-396.
- [3] Walbery, T. (1981), *A psychological Theory of Educational Productivity*. In F. H. Farey and N. Gordon (Eds.). *Psychology and Education*. Berkeley, CA: McCutchan.